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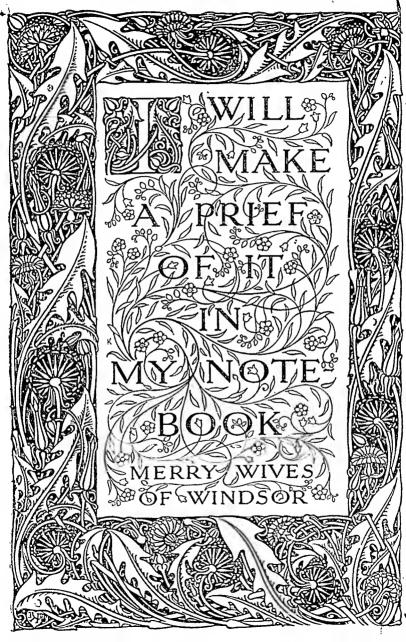


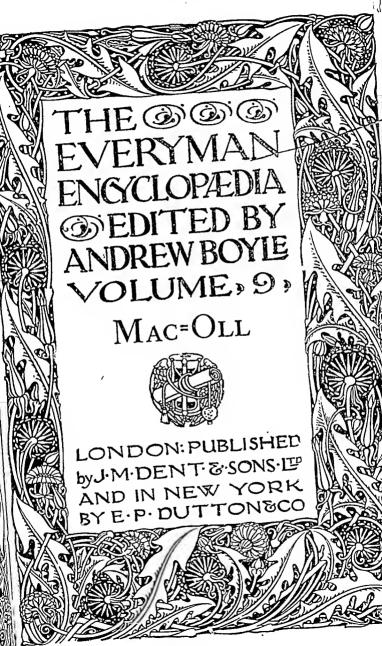
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LIST OF ABBREVIATIONS

ac., aeres. A.D., after Christ. agric., agricultural. ambas., ambassador. ann., annual. arron., arrondissement. A .- S., Anglo-Saxon. A.V., Authorised Version. b., born. B.C., before Christ, Biog. Dict., Biographical Dictionary. bor., borough. bp., birthplace. C., Centigrade. e. (circa), about. cap., capital. cf., compare. co., county. com., commune. cub. It., cubic feet. d., died. Dan., Danish. dept., department. dist., district. div., division. E., east; eastern. eccles., ecclesiastical. ed., edition; edited. e.g., for example. Ency. Brit., Eucyclopædia Britannica. Eng., English. cstab., established. et seq., and the following. F., Fahrenheit. fl., flourished. fort. tn., fortified town. Fr., French. ft., feet. Ger., German. Gk., Greek. gov., government.

Heb., Hebrew. Hist., History. i.e., that is. in., inches. inhab., inhabitants. ls., island, -s. It., Italian. Jour., journal. Lat., Latin. lat., latitude. 1. b., left bank. long., longitude. m., miles. manui.. manufacture. mrkt. tn., market-town. Mt., mts., mount, mountain, -s. N., north: northern. N.T., New Testament. O.T., Old Testament. par., parish. parl., parliamentary. pop., population. prin. principal. prov., province. pub., published. q.v., which see. R., riv., river. r. b., right bank. Rom., Roman. R.V., Revised Version. S., south; southern. sev., several. Sp., Spanish. sp. gr., specific gravity. sq. m., square mites. temp., temperature. ter., territory. tn., town. trans., translated. trib., tributary. U.S.A., United States of America. vil., village. vol., volume. W., west; western. yds., yards.



Machærodus, an extinc as large as a lion, with caning teeth sabre-shape traordinarily developed. are found in Pleistocene

traordinarily developed.

aro found in Pleistocene:

Britain and other parts of Europe, in India, and in S. America.

Machecoul, or Machicolium, a tn. of Loire-Inférieure, France, on the Florence, 20 m. from Nantes. It was capital of the old duchy of Retz.

Pop. about 1800.

M'Henry, a tn. in N. Dakota, 1820-22; Passerini, Fanfani, Milanesi, 20 m. Henry, a tn. in N. Dakota, 1873-77.

Translations.—Farneworth, 1762, 1776; Bohn's Standard Library, 1847; U.S.A., 45 m. N.W. of Chicago. Pop. (1910) 1500.

Machiavelli, Niccolo (1469-1527), was born at Florence. In 1488 he was nade secretary of the 'Ten', a board which had the management of foreign affairs. In 1502 M. was sent on a mission to Duke Valentino, the formidable Borgia, to make professions of friendship on tho part of the Florentines. In 1507 he was sent to the Emperor Maximilian. On his return he wrote several reports on the affairs of Germany, besides the letters will combustible matter. and Old Fr. affairs of Germany, besides the letters which he had sent home during his combustible matter, and Old Fr. mission: Rapporto sulle Cose di coulis, flowing), an architectural term Lamagna; Discorso sopra le Cose dell' for the opening between the corbels Alemagna; Ritralti di rojecting parapet; or Feb. 1509 he was sent before Discorsional and the corbest portal, through which

before Pisa, which wa the Florentines, and in .

the Florentines, and in a third time. He returned to Florence in Sept. 1510, having consolidated the alliance of Florence with France. When in 1512 the Medici possessed British mathematician, professor of themselves of Florence, M. was banished, imprisoned, and put to the torture on suspicion of being implicated in a conspiracy agains Medici, but was released by the vention of Leo X. He then with from public life, and wrote his courses upon Livy, his books on the XI.), and other works. See Weid

from public life, and wrote his courses upon Livy, his books on the art of war, and his Principe. The Principe was first published at Rome lives of the Roy. Soc., i.; Ward, Lives of the Prof. of Gresham College, in 1532. The Legazioni, or letters of the political missions of M., which are the key to bis Principe, were not made public till the middle of the last century. The chief works of M., They lie between the magazine rifle not mentioned above, are: Storie and the pom-pom, and fire cartridges Fiorentine; La Mandragora and La comparable with those of the rifle.

ana, o

~i dell' si la xtrarca.

vere dropped on the nts. Also a projecting

attempts have been made to produce weapons which could fire a volley, that is, a number of projectiles fired simultaneously. All these have have failed, partly because of the difficulty of loading rapidly, partly on account of the cumbrons nature of such a machine, but mainly hecause such a volley is too concentrated; in addition, range and aim wore too uncertain till the introduction of rifling in the 19th century. After this revolution something approaching a nseful weapon was produced: the Gatling gun, an American invention, and the French mitrailleuse. The former. which was an outcome of the Ameri-Civil War, had a cartridge chamber to which wore brought in succession ten harrels rovolving on an axis. The motion was controlled by a handle turned by the server, who regulated the speed of firing by its means. The Rettege M. G., or mit-railleuse, was a collection of twentyfive barrels hound together and fixed. It was more cumbersome than the Gatling: It had a range of some 4500 yds., and fired from 75 to 125 rounds per minute. Other similar weapons were the Gardner and the Nordenfeldt, the latter more a naval weapon, but the Gatling and Nordenfeldt were but the Gatling and Nordenteidt were the only really successful guns. In all 'jamming' was a most serious defect, and has not heen complotely overcome even in modern weapons. The rapidity of fire causes overheat-ing, and yet rapidity is the essential necessity. The Maxim gun, invented by Sir Hiram Maxim, is the first M. G. to prove really efficient. The weight of this gun is 60 lhs. for the 303 type: the Mark II. converted, 64 lhs. It is carried on a tripod weighing 48 lbs., and the filled ammunition box weighs 21 lhs. In this gun a part of the force of the recoil due to the explosion is utilised to eject the spent cartridge cases. The Maxim gun consists of two portions: (1) the recoiling, which moves hackwards with each explosion, and so opens the hreech, and which is forced hack again by a fusee spring; and (2) tho non-recoiling portion. The non-recoiling portion consists of (i.) a gunmetal barrel casing, which holds water of surprise. for cooling puropenings (used drawing off, a to esca steam to esca packed with a

16th century various | check lever. Along the bottom plate is the trigger bar. The rear cross-piece holds the firing lever and spring, a safety catch, and a shutter for examining the barrel. The recolling portion consists of a copper-coated harrel and two sido plates which carry a lock and crank. The feed block fits under the oover in a recess, in the breech casing, and is provided with two slides attached to a pawl, for moving the cartridges transversely. Two stationary pawls prevent the belt from slipping. The feed block has a band roller and steel guide to ensure the cartridges coming to the right position to be seized by the extractor. Once this gun is loaded pressure on a double button is all that is necessary for firing automatically. The manipulation, when once the machine is ready for action, consists merely in pressing the huttons, and tapping the gun to produce deviation of the line of fire. Transport is on horse back, a single horse only heing necessary. When in action three modes of firing are adopted and are self-explanatory; horizontal traversing, diagonal traversing, and vertical searching, together with all round traversing. The gether with all round traversing. The cartridges are grouped on the band into 'bursts' of 10 to 50 rounds, with intervals allowing time for deviating the gun. Up to 1000 yds, it is considered that the Maxim gun, firing 250 rounds per minute, can distribute annihilating fire over 25 yds. of front; the lateral gaps between the balls being not greater than 1 ft. 6 in.; if fired at an angle of 45° to the target, an increase in efficiency of 30 per cent. is reekoned. Another gun of the same type, but in many respects more handy, is the Vickers light M. G. The introduction of M. Gs. was expected to restore the halance hetween artillery and infantry, the introduction of rifling having temporarily given advantage to the latter. Improvements in the artillery itself, however, restored the balance and the M. G has too small a range to compete with the heavier ordnances. They have estahlished themselves as a support to infantry, in that they can rapidly add to intensity of firing, and owing to ease of concealment, add the element of surprise. They may cover an or an exposed flank, or he eadiness against cavalry or a · ittack. The range is usually to 1200 yds. for most effec-

packed with a though which empty cartridge cases are expelled from the gun; and (ii), the breech machines. Automatio, self-moving machines, composed of two side and one hottom plates, closed by a cover and a rear cross-plece, and containing the buffer spring, resistance piece, and cortain intervals. The word auto-

to machines in which a simple action on the part of the operator is followed by a comparatively complicated series of movements on the part of tho machine. Thus the penny-in-the-slot automatic sweetmeat delivery machine, requires the placing of a penny in the slot, when the mechan-ism performs the movements necessary to deliver the sweetmeat to the eustomer. In its simplest form the machine is actuated by the weight of the penny after rolling down an in-clined plane being applied to one end of a lever, the energy being just suffi-eient to disengage a eatch in such a way that the tray containing the sweetment is thrust forward by a spring or is released for an outward pull by the operator. Fraud is to an extent prevented by the channel for the coin being just large enough to receive it, and by so adjusting the lever that a weight less than that of an averagepenny fails to move it. The term automatic is also applied to devices where work usually requiring human agency is performed by the machine, as in the automatic cash register, where certain amounts of

by the operator, thus tending to prevent fraud. For machines devised to imitate certain actions of a human person for exhibition purposes, see

AUTOMATON.

Machynlieth, a parl. bor. and par. of Montgomoryshire. Wales, on R. Dovey. 104 m. from Dolgelly. Manu-Dovey, 101 m. from Dolgelly. factures include flannels and coarse There are slatewoollen fabrics. quarries and lead-mines. Owen Glendower summoned a parliament here in 1402. Pop. (1911) 1945.

Macieowice, or Maciejowice, a tn. of Siedlee prov., Poland, Russia, on the Vistula, 45 m. from Warsaw. Koseiuszko was defeated here by

the Russians (1794).

Mcllwraith, Thomas Sir (1835-1900), an Australian statesman and civil engineer, born in Ayr, Scotland. Emigrating to Victoria (1854), he entered the Queensland parliament (1869); was premier from 1879-83, and annexed British New Guinea to Queensland. In 1888 he was Queensland. premier for a short time, and the dispute arose with the governor land.

93, retiring to tbrough ill-health.

Macintosh, Charles (1766-1813), a

matic is applied by common consent, Scottish chemist and inventor of introduced f lead from first alum

, and obtained a patent (1825) for converting malleable iron into steel, helping Neilson to bring his 'hot-blast' process into use (1828). He took out a patent for his 'mackintosh' cloth in

patent for his 'mackintosh' cloth in 1823. See Memoir by G. Macintosh. Mack, Karl Freiherr von Leiberieb (1752-1828), an Austriau general. He entered the army in 1770, fought against the Turks, and became field-marshal in 1797, commanding the Neapolitans against the French. He took Rome, but failed to hold it, and was defeated by Championet civing was defeated by Championet, giving himself up to the French. Escaping from Paris (1800), he fought against the French under Napoleon, but was beaten on the R. Iller and at Ulm He was imprisoned (1805).Austria, but pardoned (1819). See Raumer, Hist. Taschenbuch, 1873: Thiers, Hist. du Consulat. 1845-63; Nouvelle Biog. Gén.; Straffleur (Jan. 1907).

sugarregion. Coalisfound. Pop. 4000. Mackay, Alexander Murdoch (1849-

90), a Scottish missionary, sent to Uganda by the C.M.S. (1876) as a mechanical engineer. He laboured there from 1878 till his death. See

Life by his sister (1899).

Mackey, Charles (1814-89), a Scottish poet, editor of the Glasgow Argus (1844-47), the Illustrated London News (1852-59), special correspondent at New York to the Times during the American Civil War (1862-65), revealing the Fenian conspiracy. works include: The Solamandrine, 1842; Voices from the Crowd, 1846; Egeria, 1850; Under Green Leaves, 1857; various prose works, and many popular sougs, such as 'The Good Time Coming,' Cheer, Boys, Cheer! (see Collected Songs, 1859). Marie Corelli is his son's step-daughter. See his Through the Long Day, 1887; Standard (Jan. 3), 1890.

Mackay, Hugh (c. 1640-92), a Scottish general, fought for Charles II. after the Restoration (1660), and then for France against Holland. He mar-ried a Dutch lady (1673), and later attached himself to William of Orange ng-(1689),M.

was de servod in Ireland (1691), and fighting in Flanders at Steinkerk. See Eigle by J. Mackay, 1836; Burnet's
England in 1895 Own Times, 1724-34; Napier's Claverhouse, about 1834.

Mackay, John William (1831-1902),

Comstock Lode, and after disappoint-ments became very rich. With Flood and other partners he established the Bank of Nevada in San Francisco. In 1884, with J. G. Bennett, he formed the Commercial Cablo Company and the Postal Telegraph Company, to fight Jay Gould and the Western Union.

Robert, 'Rob Donn,' or Mackay, Robert Calder (1714-88), a Gaelic bard, at first a herdsman, later steward to Lord Reay. He enlisted steward to Lord Reay. He enlisted in the army (Sutherland Highlanders) (1759-67). His poems are among the best in Gaelic literature. The translated ones include: Two Lovesongs to Annie Morrison; The Highlander's Return; The Song of Winter; A Poem on Death. See Memoir pre-

ous shrub (order Acanthaceæ), now included in tho genus Asystasia. It is grown in greenhouses, and if kept dry in winter and pruned im-mediately after flowering, it produces an abundance of racemes of rose-lilac blooms with purple veins.

Mackeesport, a tn. in Pennsylvania, U.S.A., close to the great iron centre of Plttsburg, with iron and tin works of Its own. On the Monongahela R., the borough takes its name from a certain John McKee, who was

formerly a prominent citizen.

M'Kees Rocks, a vil. of Allegheny
co., Pennsylvania, U.S.A., 5 m. from
Pittsburg, on the Ohio. Coal and
lumber are shipped. There are car-

minor are snipped. There are carshops, iron and steel works, and glass manufs. Pop. (1910) 14,702.

M'Kendrick, John Gray (b. 1841), a Scottish physiologist, born at Aberdeen. He is Fullcriau professor of physiologist. physiology at the Royal Institute of Great Britain, and president of the Physiological Section of the British Association. He has published: Animal Physiology; Life in Molion or Muscle Nerve; Science and Faith; Christianity and the Sick, and various papers on physiological acoustics.

M'Kenna, Rt. Hon. Reginald (b. 63), an Euglish barrister and politician, born in London, and edu-cated at King's College, London, and Trinity College, Cambridge. He was called to the bar in 1887, and practised till his election to parliament in 1895, when he became Liberal member for N. Monniouthshire, a seat he still

an American capitalist, called the Sccretary of the Treasury; in 1907 is Silver King. He emigrated from Ireland to New York (1840), moved to California in 1851, and to Nevada in 1852. He bought many shares in 1852. He bought many shares in 1852. He bought many shares in 1862. Territories (q.v.). 2. A riv. of N. America, originates as the Athabasca in British Columbia, and flows over 600 m. to Lake Athabasca, whence it issues as the Slave R., and after a course of 240 m. enters the Great Slave Lake. As the Mackenzie R., it leaves the W. end of the lake and flows into the Arctic Ocean, its course being estimated more than 1080 m. Its most important tributaries are the Liard, or Mountain R., Peel R., and Bear R., from Great Bear Lake; near its mouth it forms an intricate delta. This great waterway was first discovered by Sir Alexander Mackenzie in 1789.

Mackenzie, Sir Alexander (c. 1755-1820), a Canadian explorer, born of Scottish parents at Inverness. Early in life he emigrated to Canada, and for eight years (1781-89) traded in fur with the Indians at Lake Athabasca. In 1789 he discovered the river, which he named after himself. He led an exploring party to the Pacific in 1792, and on his return to England in 1801, published Voyages from Montreal to the Frozen and Pacific Oceans. See Châteaubriand,

Voyages on Amérique. Mackenzie, Alexander (1822-92), a Canadian statesman, born at Dun-keld, Perthshire, Scotland. He emi-grated to Canada in 1842, and settled at Kingston, Outario, where he became a builder and contractor. In 1867, on the union of Canada, he was clected to the Dominion parliament and became leader of the reform opposition. In 1873 he organised a liberal pointer, and became the fact. Liberal ministry and became the first Liberal 'premier' of Canada. On its fall in 1878, M. led a brilliant opposition for two years. He was a strong supporter of the close union of Canada and Great Britain, and his ministry is said to have been the purest experienced by Canada.

Mackenzie, Sir Alexander Campbell (b. 1847), Principal of the Royal Academy of Music, born at Edinburgh. He is a teacher of music, violinist, and composer, and the conductor of the Philharmonic Society. Among his publications are: Colomba; Rose of Sharon; Jason; Scottish Rhapsodies; La Belle Dame sans Merci (for orchestra); incidental musio Coriolanus and Jattle Minister, various songs, part songs, anthenis, etc.

Mackenzie, Sir George, (1636-91), a Scottish lawyer, author, and poliretains. In 1905 be became Financial tician, born at Dundee. He entered the Scottish parliament in 1669 as defeated, and M. escaped to the member for Ross-shire, and became United States till 1849, when the king's advocate in 1677. In spite of his professional work, he found time for literature, and published: Religio the rebellion, enabling him to return Stoici; Moral Essay upon Solitude; Moral Essay upon Solitude; Moral Gallantry; Discourse on the Laws and Customs of Scotland in Mackerel, the popular name given Matters Criminal; and Institutions of the Laws of Scotland. As criminal prosecutor in the days of the Atlantie. Indian, and Pacific prosecutor in the days of Covenanters, he earned the nick-name of 'bluidy Mackenzie.' See Life prefixed to his Collected Works.

Mackenzie, Henry (1745-1831), a novelist, was by profession a solicitor, and practised at Edinburgh, being and generally finlets; the pseudo-the partner of George Inglis, whom branchiæ are well developed, and the he succeeded as crown attorney for air-bladder is small, or may be miss-Sc

set of 88

which was at once proits and dull.

Mackenzie, Sir Morell (1837-92), an eminent English physician, born at Leytonstone, Essex, and educated professionally at the London Hospital Medical College, Paris, and Budapest. At the London Hospital he held successively the posts of medical officer, assistant-physician and phyofficer, assistant physician and physician from 1860 till 1874, when he resigned. The London Throat Hospital was founded by him in 1863, and his skill as a laryngologist led to his attending the Emperor Frederick III. of Germany in his fatal illness. His most important publications are: The Use of the Laryngoscope; Essay on Growths in the Larynx; The Hygiene of the See Life Focal Organs, etc. Haweis, 1893.

William Lyon (1795-Mackenzie. 1861), a leader of Canadian rebellion of 1837-38, born at Dundee, Scotland. Emigrated to Canada in 1820 and settled at Queenstown, where he became a journalist and edited a newspaper entitled the Colonial Advocate in which he took an extreme stand against the government. In 1828 he was elected to the legislature, but was expelled for alleged libel on the He visited the United States in 1829, and was sent to England in 1832 as the delegate of his party, to appeal against certain abuses. In 1834 he became mayor of Toronto and founded the Canadian Alliance Society. In 1837 he led tho

the Atlantic, Indian, and Pacific They are fusiform fishes, Oceans. eovered with small scales, or occasionally with a naked skin surface; the eyes are lateral; the teeth well-developed; there are two dorsal fins and generally finlets; the pseudo-branchiæ are well developed, and the

M. are widely disgreatly valued as colour is reddish.

ng a larger supply the late sixties he began to compose of blood and nerves than is the case his best-known work, The Man of with other fishes, and their tempera-Recling, which was published anony ture also is several degrees higher mously in 1771, and attracted much attention. Two years later, designed as a contrast to the earlier work, sides are brilliantly iridescent. In appeared The Man of the World, labout these fishes are generally recommended to the state of the state bands of black and green, and the sides are brilliantly iridescent. In habit these fishes are generally pelagic and spawn in the open sea; they travel at considerable speed. Scomber scombrus, the common M., found in the N. Atlantie, has no airbladder; S. pneumatophorus has an air-bladder. Thymnus, the tunnies, also belong to this family, Th. also belong to this family, Th. thimmus, the largest species, reaching a length of 10 ft.; Th. pelamys, the bonito, pursues flying-fish, and other propice, of this gones are provided. species of this genus are provided with long pectoral fins and are called by sailors 'albacores.' Allied genera include Pelamys, Cybium, Acantho-cybium, and Rhachicentron. Fossil Fossil forms of Seombridæ are found in the Eocene and Miocene strata

Mackinac, the name of the strait which separates Lakes Michigan and Huron in N. America. Mackinac Is. stands in the strait, its chief town being Mackinac, a resort during the summer months. about 1200. M'Kinley, Pop. (of town)

Alaska, N. An

point in that height of over 20,000 ft., with glaciers on every side. Dr. Cook laid claim to having ascended the mountain in 1906, but in June 1913, a party led by Archdeacon Hudson Stuck accomplished the feat.

M'Kinley, William (1843-1901), the 25th president of the U.S.A., horn at Niles, Ohio. When the Civil War broke out, he chlisted as a private in the Ohio volunteer infantry. Alliance Society. In 1837 he led tho the end of the war he returned home rebels in the insurrection of Upper to study law, He identified himself Canada. They were, however, utterly with the Republican party, and rapidly became known as an able speaker. In 1876 he was elected to Congress; here his keen protectionist viows and his bard work and enthuslasm made him a marked man. In 1889 be was Republican leader in the House of Representatives, and chairman of the Committee of Ways and Means; as such he introduced and carried the great Tariff measure of 1890, known as the M Kinley Tariff. In 1891 hecame governor of Ohio, which he held till 1895. In 1896 be was cleeted president of the republic, and again in 1900. The Spanish-American War was the chief event of his first term of office. Ho visited the city of Buffalo (New York) to deliver a public address, a great reception was held for the president on the day following. A Pole, Leon Czelgosz, fired at the president with a revolver. Ho died from the effects of his wounds a few days later. His assassin was said to ho an anarchist, and was executed in October 1901.

Mackintosh, Sir James (1765-1832), a philosopher, studied medicine and took his degree in 1787. Eight years later he was called to the bar, and from 1818 until 1824 was professor of law and general politics at Haileybury. For several years be sat in the House of Commons. He became known in 1791 through his Vindicia Gallica, which was a reply to Burke's Reflections on the Revolution in France. He was the author of many works,

writings. There is a biography by bis son, R. J. Mackintosh, 1836.
Macklin, Charles (1697-1797), an actor, began his theatrical career about 1725, and in his profession attained to a high position, one of his most successful impersonations being state of the control of the co Shylock. He acted mainly at Covent Garden until his retirement from the stage in 1789. He wrote many plays, and produced most of them himself. In 1759 he produced Love à la mode at Drury Lane, in which he acted with his daughter Charlotte. This and The Man of the World, played at Covent Garden in 1781, were his most successful plays. There are hiographies by F. A. Congreve (1798), and Judge Parry (1891).

Macknight, James (1721-1800), a

Scottish clergyman, a native Irvine, Ayrshire, was educated at Glasgow and Leyden. In 1753 he was ordained minister at Maybole, Ayrshire, and finally heeame a minister in Edinhurgh (1772). His chief works are: A Harmony of the Four Gospels, 1756; The Truth of the Gospel History 1763; and A New . of all the Apostolica

Maclagan, William Dalrympie (1826-1910), an English ecclesiastic, horn in Edinhurgh, and educated at Edinburgh and Camhridge. He began his career in the Indian army from 1847-52, and after being ordained to Newington, then vicar of St. Mary Abhot, Kensington, and in 1878 hishop of Lichfield. In 1891 he was appointed to the sec of York. Among appointed to the sec of 101s. Amous his literary works may be mentioned his Pastoral Letters and Synodal Charges, 1891, and his joint editorship of The Church and the Age.

Maclaren, Alexander (1826-1910),

was a native of Glasgow. He was appointed minister of Portland Chapel. Southampton, in 1846, and of the Union Chapel, Manchester, in 1885. He wrote numerous books, most of them dealing with Bible subjects and explanations of the same. One of his chief works is Expositions of Holy Scripture, 1904-10.

Maclaren, Ian, see WATSON, REV.

JOHN.

Maclaurin, Colin (1698-1746). a Scottish mathematician, was a native of Kilmodan in Argyllshire. He was educated at Glasgow University, and in 1717 was appointed professor of mathematics at Marischal College, Aberdeen, and in 1719 while on a visit to London, was made a member of the Royal Society. His next apof the Royal Society. His next appointment was to the chair of mathematics at Edinburgh University in 1726. He was also instrumental in preparing the defences of Edinburgh against the Pretender in 1745. He followed closely on the lines of Sir Isaac Newton, and is rememhered for his contributions to science with regard to the principles of fluxion which helped to explain the theory of which helped to explain the theory of the tides. Among his writings are: Treatise on Fluxions, 1742; An Account of Sir Isaac Newton's Philo-sophical Discoveries, 1748. Macle, in crystallography, a term used for the phenomenon otherwise known as twinning. This occurs when

two crystals have a common face and are so disposed that one may be brought into the position of the other by rotation about an axis called tho The term was twin-axis. generally used, but is now only found with any frequency among French with any irequency among French writers. The mineral known as chiastolite, consisting of aluminium silicato with magnesium and iron, is also called M. It is commonly used for making heads for rosaries.

MLean: 1. A tn. of Clarence Co.,
New South Wales, on the Clarence R.,
28 m. N. E. of Grafton, Pop. 1500.

28 m. N.E. of Grafton. Pop. 1500. 2.

co. of Dakota, U.S.A., having for western boundary the R. Missouri. Maelean, Kaid, General Sir Harry

Aubrey de (b. 1848), a son of Andrew 1902), a political economist, born in M. of the Macleans of Drimnin. He became instructor to the Moorish cambridge. He was called to the bar army, under the late Sultan, and accompanied him on his expeditions. Later he became colonel of the Sultan ance. He was an authority on bills of of Morocco's bodyguard, and in July 1907 while on a mission f. 1907, while on a mission f. Sultan, was captured by Rais held prisoner for sevon mon was released on a ransom of and decorated by the British

ment for services rendered. Macleania, a genus of trubs (order Vacciniacem) trailing shrubs yellow and scarlet cylindrical flowers, grown in greehouses in hanging

baskets.

Maclehose, Mrs. Agnes (1759-1841), was a native of Glasgow. Sho was separated from her husband, and at Edinburgh became acquainted with Robert Burns, who wrote to her as 'Clarinda,' and dedicated lyrics to her, Their correspondence was after-

wards published.

M'Lellan, George Brinton (1826-85), an American general and politician, born at Philadelphia, and graduated at West Point in 1846. He served in the Mexican War of 1847-48, and after being instructor at West Point, and exploring Red R. and Texas, he was sent to Europe in 1855 to report was sent to Europe in 1855 to report on military systems as observed during the Crimean War. His report, entitled The Armies of Europe, published in 1861, was a brilliant work. On the outbreak of the Civii War he joined the North. His success in winning over Western Virginia led to his annealization of the his annealization. his appointment as commander of the army of the Potomao, which he organised, and with which he captured Yorktown in 1862. He was goneral-Yorktown in 1862. He was general-in-chief of the armies from 1861 to 1862, when he defcated Lee at Antic-Lincoln then relieved him of the chief command, and he resigned his commission in 1864. In the same year he was the defeated Democratic candidate for the presidency, and was governor of New Jersey from 1878 to 1881. He died at Orange in See his book entitled New Jersey. M'Lellan's Own Story, 1886.

M'Lennan, John Ferguson (1827-81), a sociologist, born at Inverness, and educated at King's Collego, Aberdeen, and Trinity College, Cambridge. In 1857 he was called to the bar, and for a time filled an appointment as draughtsman of Scottish parliamentary bills. He spent a great deal of time in research work on the custom

re, and is the

ship in Ancient Greece. Macleod, Henry Dunning (1821- 1870 he was

MacMahon

14; A History of Banking in Great Britain, 1896; Indian

Currency, 1898. Macleod, Norman (1812-72), a Scottish author and minister, a native of Campbeltown, Argylishire. He was educated at Glasgow University, and studied divinity in Edinburgh, becoming a minister at Loudon in Ayrshire (1838). In 1843 he went to Dalkeith, and in 1852 to the Barony
Church, Glasgow, as minister. In
1857 he became chaplain to Queen Notoria. Among his literary works are: Eastward, 1866; and Peeps at the Far East, 1871; as well as articles in Good Words, which he edited (1860 et sea.). See Momoir by Donald M. 1876.

Maclise, Daniel (1806-70), a painter, came from Cork to London in 1827, and acquired fame as a portraitpainter. He was elected a member of the Royal Academy in 1840, and sub-sequently refused the presidency of that institution. In the late fifties he painted two magnificent frescoes in painted two magnificent frescoes in the Royal Gallery of the House of Lords. He is, perhaps, most popularly known for the long series of character sketches of notable folk which he contributed to Fraser's Magazine, (1830-38), which have been collected under the title of The Maclise Portrait Gallery.

Maclura aurantiaca, or Osago hardy deciduons spiny Orange, a hardy deciduous spiny tree, with bright green, egg-shaped leaves and heads of inconspicuous flowers, which are followed in its N. American home by large orange-like fruit; its slimy juice was used by the N. American Indians to smear their faces.

MacMahon, Marie Edmé Patrice Maurice de (1808-93), Duke of Ma-genta, and marshal of France, and second president of the third republic, born at Sully, Seine-et-Loire, France, of Irish descent. Graduated at the military school of St. Cyr, and served in the Algiers campaign of 1830. In 1835 he went to the Crimca, and took part in the operations against Sc-bastopol, successfully assaulting Malakoff. On the ontbreak of the war in Marriage with Austria Ceremonies, 1865; reprinted in Kin- himself at th

again at the

six years later. Consult Dandet, Le maréchal de M'Mahon, and Lafarge, Histoire complète de M'Mahon.

MacMaster, John Bach (b. 1852), an American listorian and engineer, born at Brooklyn, New York, and educated at the college of New York, where he afterwards became instructor of English. From 1877-83 he was instructor of civil engineering in Princeton University, and then became professor of American history at the Pennsylvania University. 1905 he became president of the American Historical Association. His publications include: History of the People of the U.S. (8 vols.): Bridge and Tunnel Centres; Benjamin Franklin as a Man of Letters; With the Fathers, etc.; and he is a contributor to extent for periodicals and the to scientific periodicals, and to the Cambridge Modern History.

Cambridge Modern History.
Macmillan, a well-known English
publishing house, founded at Cambridgo in 1844 by the brothers Daniel
and Alexander M. In 1857 the elder
brother died and the business was
carried on hy Alexander alone. He
transferred it to London in 1858, and with the increase of trade, opened a branch in New York (1869). F. O. Macmillan, a son of Daniel, subsequently became director of Macmillan & Co., Ltd., London, and of Macmillan & Co., New York, and G. A. Macmillan, a son of Alexander became a member of the firm in 1879. In 1893 the business was converted into a limited liability company. 1901 a publishing centre for India, Burma, and Ceylon was started in Bombay. Among the firm's literary undertakings are the Golden Treasury Series, and the Globe editions.

Maomillan, Alexander (1818-96), a founder of the well-known publishing firm of the name, and a publisher of the 'old school,' whose intimate association with the literary men of his time has been made the subject of a memoir. He was of Scottish birth. and after some provincial experience, he opened a publishing business with his brother Daniel, which has now a world-wide reputation.

Macmillan, Daniel (1813-57), the clder brother of the above and senior partner of the husiness of the name which was afterwards so successfully carried on by Alexander M. He began life as an assistant to a bookseller in Cambridge, in whose house he learnt his trade and acquired a taste for literature. M. combined a keen commercial instinct with a genuine love of books for their own sake.

and at Worth. In 1871 he was called to the army of Versailles to recover Paris from the commune, and on the firm still holds important copyriliers' resignation in 1873, he was rights in books of this class. A great elected president of France, resigning ness was the publication of Kingsley's works and Tom Brown's Schooldays.

Macmillan, Hugh (1833-1903), a Scottish author and divine, a native of Aberfeldy, and was cducated at Edinhurgh University. He was minister of the Free Church at Kirkmichael, of St. Peter's Church in Glasgow, and of the Free West Church, Grecnock (1878-1901). He wrote: First Forms of Vegetation, 1861; Bible Teachings in Nature, 1867; The True Vine, 1871; The Poetry of Plants, 1902; The Touch of God and other

Sermons, 1903. Macmonnies, Frederick (b. 1863), an American sculptor, born in Brooklyn, New York. At the age of seventeen he was apprenticed to A. St. Gaudens, and in 1884 he went to Europe and studied under Falguière in Paris, opening a studio of his own within the opening a studio of its own whilst the space of a couple of years. His statuc of 'Dlana' was honourably mentioned in the Salon of 1889, and his 'Bacchante' (Salon, 1894) was purchased for the Luxembourg. Specimens of his work are the Washington Memorial Arch, New York city; 'Nathan Hall'in City Hall Park; Prosect, Park Brooklyn (status) and pect Park, Brooklyn (statues), and 'Sir Harry Vane' in the new Boston Public Library. He is also a skilful

painter. Macnaghten, Sir William Hay (1793-1841), a diplomatist, educated at Charterhouse, he went to India (1809) as a cadet under the E. India Company. He devoted himself to the study of oriental languages and customs, and published several works on Hindu law. M. was appointed gover-nor of Bombay, September 1841, hut before he could assume office he was

murdered by the rebel Afghan chiefs on the Secah Sung plain. Macnamara, Thomas James (b. 1861), an educationalist and politician, born at Montreal, and educated at St. Thomns's School, Exeter. From 1876-92 he was a teacher at Excter, Huddersfield, and Bristol, and in 1896 became president of the National Union of Teachers. At the General Election of 1895 lic contested Deptford (Radical), and in 1907 hecame parliamentary secretary to the Local Government Board, being transferred to the Admiralty in 1908. He has published many books on educational methods: Schools and Scholars; Schoolmaster Skelches: Tariff Reform and the Working Man, etc., and Is a constant contributor to magazines and daily The journalism.

Macneill, Hector (1746-1818), a Scottish poet; passed his early youth in the neighbourhood of Loch Lomond, but afterwards had an adventurous career in the British West Indies. Much of his life was spent in Jamaica, and towards the end he retired to Edinburgh, where he died. tired to Edinburgh, where he died. M.'s chief work is Will and Jean, but

his songs are even better remembered. MacNeill, John Gordon (b. 1849), an Irish politician, born at Dublin, and cducated at Trinity Dublin, and cducated at Trinity College, Dublin, and Christ Church, Oxford. From 1882-88 he was professor of constitutional and criminal Took silk law at King's Inn, Dublin. Took silk in 1893, and in 1906 was commended by Campbell Bannerman in the House of Commons for procuring the abolition of flogging in the navy. Since 1887 he has represented S. Donegal as a Nationalist. He has published: The Irish Parliament, what it was and what it did; Titled Corruption: English Interference with Irish Industries, etc.

ounty seat of is, U.S.A., 60 m. engaged chiefly in the manuf. of stoneware.

(1910) 5774. Macon: 1. The cap. of the dept. Macon: 1. The cap. of the cept. of Saône-et-Loire, France, on the R. Saône, and at this particular spot the river is crossed by a bridge of twelve arches. The interesting features of the town are the ruins of a cathedral and the church of St. Determine Personaura et al. Peter in Romanesque style. Its ancient name was Matisco, and it was the birthpiace of Lamartine. It trades chiefly in wine. Pop. 19,000. 2. The cap. of Bibb co., Georgia, U.S.A., on the Ockmulgee R., 80 m. S.E. of Atlanta, and is a great railway. centre. T' College,

t also Mercer manuis, flour and iron goods. Pop. (1910) 40,665.

Mapherson, James (1736-96), a man of letters, began at an early age to write poetry. In 1762-63 he published two poems, Fingal and Temora, which he stated were translations from the Gaelic of Ossian. The works attracted much attention, but presently the critics cast doubts upon the source, and a prolonged con-troversy took place. M. seems not to have been seriously concerned at tho charge of forgers, and made no parti-cular offort to rebut it. M., in 1775, edited Original Papers containing the Secret History of Great Britain from the Restoration to the Accession of George I. See Boswell's Johnson,

passim.

Maerauchenia, an extinct animal with horse-like skull, tapir-like nasal bones, llama-like neck, and teeth partly horse-like and partly rhino-ceros-like; found in S. American

later tertiaries. Macready, William Charles (1793-1873), an actor; made his first appearance in the provinces in 1810, and six years later played in London, where his Richard III. made him popular. He held a high position in his profession until his retirement in 1851. A great, powerful, and intelligent actor, he was not an amiable man, nor happy, as may be gathered from his Diary, a new edition of which

his Diary, a new edition of which appeared in 1912.

Macrinus, M. Opilius Severus, Emperor of Rome (217-218 A.D.), born at Cæsarea, Mauritania, 164 A.D., of humble parentage. At the instigation of his patron, Plantianus, he was admitted to the service of the Emperor Septimus Severus, and after receiving several appointments of trust, eventually became prefect of the prætorians, under Caracalla, an office in which he acquitted himself prin in which he acquitted himself prudontly and honourably. On the death Caracalla he was proclaimed peror. He eventually met his cmperor. death at Cappadocia, succeeded by Elagabaius. and

Macrobius, Ambrosius Aurelius Theodosius, a Roman grammarian whose period is uncertain, but who probably lived about the beginning of the 5th century. Only a comparatively small number of his works are extant, amongst which are a commentary on Cicero's Dream of Scipio, and a collection of essays, Salurnaliorum conviviorum libri sep-tem, the latter incomplete.

Macrodactyles, a sub-order or tribe of the order Grallatores, wading birds, characterised by the four clongated toes on each foot. M. includes the rails, waterhens, and coots. The name Macrodactylus was formerly given to a genus of lamelli-corn beetles, now merged in Scarabeidæ.

Macroom, a tn. in co. Cork, Ireland, on the R. Sullane, 20 m. W. of Cork. Pop. (1911) 3800.

Macropodians, or Macropodidæ, a family of marsupials or pouched animals with large powerful hind feet, comprising all the kangaroos. The name is also given to sea spiders Macquarie: 1. A bay of Tasmania, and spider crabs, a family of Oxyon the W. coast; forms an imby long, broad-swimming tails, and including the lobsters, crayfish, prawns, and shrimps.

Macrozamia, a genus of tall ever-green perennials (order Cycadaceæ) with long, leathery, graceful palm-like leaves and bearing scaly ovoid cooes. They grow well hut slowly in a green-

house, needing liberal watering. MacTaggart, William (1835-1910), an artist, the son of a erofter, and born in Argyll. His father appren-His father apprenticed him as dispenser to Buchanan, who encouraged his talent for painting and gave him an intro-duction to Daniel Macnee. On the latter's recommendation, M. was admitted a pupil at the Trustees' Academy, Edinburgh. He first exhibited at the Scottish Royal Academy demy in 1855, and afterwards was frequently represented at the Royal Academy, London.

Mactan, a prov. of the Philippines, consists of a small coral island off the coast of Cebú. Magellan was killed here in 1521.

a genus of widely distributed bivalve molluses, living just below the surface of sandy coasts. The foot is large and tonguc-shaped: the syphons are joined together and fringed at the ends; the sbell has a deep plt to which the internal liga-ment of the hinge is attached. The shell is triangular in form and almost oquilatoral. It bears a resemblance to a kneading trough, hence the generic name.

MacWhirter, John (1839-1911), a Scottish painter, born at Inglis Green, near Edinburgh. He was a pupil at the art school of the Board of Manufacturers, Edinburgh. He took up his abode in London in 1869, and in 1877 visited the United States and painted many fice pictures depicting the scenery of California. In 1879 he was clected an A.R.A. and in 1894 The most characteristic of an R.A. his works are his noble Highland landscapes, portraying the rugged grandeur and beauty of the moors. Perhaps his best-known picture is 'June io the Austriao Tyrol' in the Tate Gallery, Londou. Other Tate Gallery, Londou. Other examples of his work are: 'Loch Katrine,' 'The Lord of the Glen,' 'The Silver Straod,' 'The Track of tbe Hurricane,' etc.

Madagascar, an island lying off the S.E. coast of Africa, about 250 m. from the mainland, from which it is separated by the Mozambique Channel. It is 980 m. long and its extremo width is 360 m., with an area of 228,000 sq. m., excluding de-pendent islands. It is the third

Macroura, or Macrura, a group of terior is traversed by a mountain decapod crustaccaus, oharacterised range, rising in some places to over range, rising in some places to over 10,000 ft., from which numerous rivers flow E. and W. Extinet volcanocs and hot springs are found in various parts of the island, the highest peak belng Ankarabra (over 9000 ft.) in the N.E. The chief harbours are Diego Suarez, Tamatave, Antongil Bay, Nosse Be, Port Antongil Bay, Nosse - Bé, Port Radama, and the bays of Betsitoka and Bombeloke (or Majunga). Vegetation is luxuriant, and the island is elothed in many districts with dense forests which supply valuable timber, such as ebony, mahogany, rosewood ette., besides raffia palms, gums, and rubber trees. Many rare varieties of orchids and ferns are found, and a peculiar feature is the traveller's tree (Ravenala madagascariensis). Fruits abound, and include mangoes, tamarinds, bananas, lemons, bread-fruit, and ground nuts, and coffee, cocoa, sugar-cane, hemp, and vanilla are eultivated to a considerable extent. The climate is salubrious for about half the year, but during the rainy season it is unhealthy for Europeans. The highest mean temperature (80°) occurs at Dicgo Suarez, and the average rainfall is about 28 in., but in the S. It may exceed 40 in. Hurricanes and thunderstorms are prevalent and severe. The country is rich in minerals, gold, manganese, lignite, silver, zinc, antimony, copper, iron, lead, and precious stones being found. but the resources are practically undeveloped. The fauna includes many curious animals, such as the aye-aye and lemur, but is devold of the larger carnivora. There are over 240 species of birds, many of brilliant plumage, and also several varicties of chameleoos. Fossils of extinct animals, birds, and reptiles have been found, including the Æpyornis, Mullerornis, and hippopotami, gigantie dinosaur. The cluie exports consist of animal products, rubber, hides, live animals, fibres, textiles, grains, and gold, and amount to nearly £2,000,000 annually, while the imports reach a total of £1,500,000. There are very few good roads, but there is railway communication between Antananarivo, the capital (pop. 94,813), and Brickaville on the E. coast, which is being extended to the port of Tamatave. From this town there is also a line to Irondra. Palanquins are used as a means of conveyance for short distances. population is made up of many different tribes, the Hovas being the chief. They present many characteristics of the South Sea islanders; are of fine physique and strongly proportioned, and active in habit. They inlargest island in the world. The in- habit the centre of the island and

profess Protestant Christianity their religion, but retain many of ture, and edited Havelok the Dane, their old-time superstitions and customs. The Hovas differ considerably conjunction with Josiah Forshall, from the other tribes-the Sihanakas, Tharas, Betsileos, and the Sakalavas,
—whose features are African. Pop.
of island 3,054,658. M. was known
to Ptolemy under the name of
Menuthias, and it is certain that
there were Arab settlements over a thousand years ago, for traces of Arab occupation are evident to-day in the Malagasy language. Marco Pole mentioued it, but the first known European to land on its shores was Diaz, the Portuguese, who visited the island in 1500. Later the Dutch and then the French established small ports in different parts of the country, which was ultimately brought under French control in 1896. Queen Ranavalona III. was deposed and exiled to Algeria. She had reigned since 1883. The island is now administered by a governor-general. In nineteen provinces there are civil administrators, and in five provinces military officers conduct affairs. Natives are employed in minor ports in both military and civil govern-ment. Education is now compulsory between the ages of cight and fourteen. Since the French occupation of 1896 the country has contracted a debt of \$4,200,000, mainly

tracted a debt of \$1,200,000, for the purpose of public works.

Madaras: 1. A vil. of Hungary in the counitat of Báos-Bodrog, 41 m.

Service of Szegedin. Pop. 5000. 2. A

Maava Rao, Sir Raja 1, 1762-717, an Indian administrator, was born at Combaconum in Madras; prime minister of Travaneore in 1857. He also acted for several years as ad-ministrator of the state of Baroda during the minority of the Gaekw He displayed the most broad-mind and liberal views, although he mained a faithful Brahman and e

all in his power to encourage and promote social and political reforms.

Maddaloni, a tn. of Italy in the prov. of Caserta, 15 m. N.N.E. of Naples; it is supposed to be bult on the site of the ancient Suessula. There is a splendid aqueduct near by, which was built by Charles III. to convey water to the caseades in the gardens at Caserta. Pop. 21,000.

Madden. Sir Frederick (1801-73), an archarologist. devoted himself to the

all in his power to encourage and pro-

archeologist, devoted himself to the study of Norman, French, and Anglo-Saxon, and collated the manuscripts of Cædmon for the University of 13.500.

Oxford, 1825. He was keeper of the manuscripts at the British Museum, land, stands on the Severa, 14 m. 1837-66. He made many important E.S.E. of Shrewsbury. It has coal

as | contributions to paleographic litera-

Wielit's Bible, 1850.

Madder, the name given to several species of the genus Rubia. Dyers'
M. (R. tincforum) is a trailing or climbing annual, and its root from carly times has been extensively used for the production of a wide range of dyes, notably Turkey red, all of which are very stable. Synthetic dyes have now almost entirely superseded

it. See Robia.

Madeira, the only important island of an archipelago of volcanic origin, situated somo 400 m. from the N.W. coast of Africa. M. is one mass of basalt, rising with a steep ascent from S. and N. towards the interior, the highest point being Red Peak (6165 ft.). The declivities of the mountain masses are furrowed by deep and generally narrow valleys and dopressions, traversed by streams of clear water. The coast-line is bold and rocky, with good natural har-bours. The climate is remarkably mild and equable, and for this reason M. is much resorted to by consump-tive invalids, especially from Eng-land. The soil is fortile, and there are vineyards and orchards, producing choice wines and frults, but the vineyards, onco very extensive, have at times suffered greatly from the ravages of the oidium, and in late years sugar plantations have to a considerable extent replaced them. Cochineal is also an important product. The course with Made at the consideration of the course with Made at the work of the course with Made at the work of the course with the course wi S.W. of Szogedin. Pop. 5000. 2. A considerable extent replaced them. vil. of Hungary in the conditat of Cochineal is also an important pro-Great Cumania, a few miles S.E. of duct. The commerce with England is the Theiss. Pop. 8000.

Madaya Rao, Sir Raja T. (1829-91), being 'Madeira' wine. Al. was disbeing 'Madcira' wine. M. was discovered about 1420 by Zarco and soon afterwards settled by the Portuguese, to whom it still belongs. Funchal, the capital, is in regular communication with Lisbon and

> Magena Wine is manufactured in the Madeira Is. from a mixture of black and white grapes; when vinted separately these grapes produce Tinta and Verdelho wines. High-class wincs known as Bual, Sercial. and Malmsey are also manufactured in Madeira. The vines were brought from Cyprus or Crete in the 15th century; in 1852 they were totally destroyed by the oidium discase, but

and iron mines, and iron foundries. Pop. (1911) 3006.

Madhava Acharya (Hind., spiritual teacher), a Hindu scholar and philo-sopher, lived in the 14th century undor King Bukka, to whom he acted as chief minister and spiritual adviser. He became abbot of the monastery of Sringiri, and wrote many im-portant hooks on Hindu mythology and philosophy.

Mādhopur, India, a vil. in the Gurdāspur dist., Punjab, near the head-works of the Bāri Doāb Canal.

Pop. 1360.

Mādhubani, India, an important trading centre in the Darbhangā

dist., Bengal, and was constituted a municipality in 1869. Pop. 18,000.
Madhusudana, Datta (1824-73), a Hindu poet, born at Sagandari, Bengal, and hecame a Christian convert in his wouth. He translated vert in his youth. He translated several of Shakespeare's plays into Hindustani, under the name of Michael M. S. Dutt, and was the author of Sermislá, Ralnavali, and

other classical dramas.

Madison: 1. The cap. of Wisconsin, U.S.A., stands on an isthmus between lakes Mendota and Monona, 82 m. W. of Milwaukee, in the middle of a beautiful valley. It contains the state capitol, university, and other important buildings, and has manufs. of machinery, boots and shoes, farming implements, ctc. Pop. (1910) ing implements, ctc. Pop. (1910) 25,531. 2. The cap. of Jefferson co., U.S.A., stands on the Ohio R., 86 m. S.S.E. of Indianapolis, It has flour-mills, hreweries, pork-packing factorics, etc. Pop. (1910) 6934. 3. A hor, in Morris eo., New Jersey, stands nor. in Morris co., New Jersey, stands on the Lackawanna R., 26 m. W. of New York. It is the seat of the Drew Theological Seminary, and is famous for its rose-culture. Pop. (1910) 4115.

Madison, James (1751-1836), the fourth president of the U.S.A., born at Port Conway, Virginia; graduated at Prinectown (1772), and afterwards studied law. He was appointed a

studied law. He was appointed a memher of the Virginia Convention (1776), and thenceforth devoted himself to polities. In 1784 he was elected to the Virginia Congress and hecame a zealous advocate of religious free-M. was also instrumental in the convention of 1787 forming which drew up the Federal Constitution, and was elected to the first national Congress. He became a leader of the Republican party, and held the post of Secretary of State during Jefferson's presidency. was elected president in 1809, and his period of office was a stormy one, its ehief event being the war with England (1812-14). In 1817 he retired to his scat at Montpelier, Virginia, where he remained until his death.

Madison River, one of the head-streams of the Missouri, rises in the Rocky Mts., Montana, and has a course of 230 m.

Madisonville: 1. The cap. of Hopkins co., Kentucky, U.S.A.; has coal mines, tobacco factories, lumber mills, etc. Pop. (1910) 6241. 2. A tn. of Hamilton co., Ohio, U.S.A., 9 m. N.E. of Cincinnati. Pop. (1910) 5193.

Madness, see Insanity.

Madoc, or Madog, the second son of Owen Gwynedd, Prince of Wales. Lived in the 12th century. According to a Welsh legend, he is said to have discovered America about 1170, at which time he was forced to fly from Wales on account of a rebellion against his dynasty, which proved successful. He is helieved to have sailed on a second voyage of discovery, since when he was heard of no more. His story forms the subject of a poem by Southey, entitled Madoc, 1805.

Madonna (It. for 'Our Lady'), a title reserved in the Roman Catholie Church for Mary, the mother of Jesus. She was the wife of Joseph, a carpenter of Nazareth. At His eruci-fixion, Jesus commended His mother, who was present, to the care of John the Apostle. The mention of 'the hrethren of the Lord' indicates that she had other children. According to apperyphal legend, she was the only child of Joachim and Anna, and on her death was horne up to heaven in a hlaze of light. This miracle is annually celebrated on Aug. 15, in the great Feast of the Assumption. Other feasts of the Virgin are the Presentation (Nov. 21), the Conception (Dec. 8), the Purification or Candlemas, the Annunciation (Deo. 18), the Visita-tion (July 2), and the Nativity of Mary (Sept. 8). The Annunciation commemorates the visit of the archangel Gabriel, who brought the tidings of the birth of Our Lord, and the Visitation the visit of the Virgin to the aged Elizabeth. The doctrines of the Immaeulate Conception, or the sinlessness of Mary, and of her perpetual virginity (aet $\pi \alpha \rho \theta e r(\alpha)$). were not formally acknowledged by the church till the 5th century A.D. Inasmuch as Mary is the 'Mother of God' (θεοτόκος), she has been exalted, and has grown to be the object of profound popular devotion; for by virtue of her motherhood she is deemed the supreme interessor with her Son. The countless paintings, images, and statues of the 'Madonna and Child' are all inspired by the thought that through the Virgin the human tonches the divine.

Madox, Thomas (1666-1727), a legal antiquary; was admitted to the Middle Temple, but never called to He wrote many valuable

Madras: 1. A presidency of British India, occupying, with the exception of Mysore and Coorg, the whole of tho sonthern peninsula. Northward its bounderies, passing from W. to E., are N. Kanara, the district of Dharwar, Haidarabad, the Central Provinces, and Orissa. The coasts are flanked by the Western and Eastern Ghats, which seem to he little more than hills, because between them the great central plateau reaches an elovation of from 1000 to 3000 ft. The highest peak is Anjinadi (8850 ft.) in Travancore. The Nilgiri Hills are an offshoot of the Western Ghats. Between Nellore and M. on the E. coast is the Lake of Pulicat (37 m. long), whilst the narrow coastal strip on the W. has its shores indented by several lagoons, the largest of which is Coehin (120 m.). Along the Malabar coast there is an annual rainfall of 150 in., but the highlands intercept the rainbut the highlands intercept the rain-clouds, so that on their landward side the precipitation is as low as 20 in. It is below 50 in. In Madura and Megapatam, etc. Famines are com-paratively frequent, but are more severe in the northern than in the southern interior, where rains pass over the Palghat Gap. The three chief rivers, the Godavari, Kistna, and Kaveri, all rise in the Western Ghats, and after a south-easterly course and after a south-easterly course empty into the Bay of Bengal. presidency consists of 141,726 sq. m. Academy. In 1873 he was made of these 20,000 are forest lands, teak, foreign associate of the Beaux-Arts, chony, and rosewood being the trees He painted many portraits of noted of highest commercial

million acres are sown (rice and millet, etc.); ? sesamum and other oil 2,000,000 with eotton.

2,000,000 with cotton. Indigo, to-hacco, tea, sugar-cane, and coffee are also grown. The chief exports, placed in order of value, are raw cotton, seeds, rice, and indigo. In 1911 the exports were estimated at £14,000,000, and the imports at half that amount. There are five native thates and twenty-four districts placed. that amount. There are five native etates and twenty-four districts. Pondicherri, Karikal, and Yanaon on the E. and Mahé on the W. coast belong to France. M. the capital, Godavari, Tinnevelly, and Negapatam are the ehief ports, and other towns of importance are Trichlnopoli, Tanjore, Calicut, Madura, and Salem. The stank industries are rice, tolagen. The staple industries are rice, tobacco, fish and coffee curing, and oil and indigo pressing. The natives speak the Dravidian dielects, Tamil, Telegu,

works on historical and legal sub-1 (41,405,404 in 1911) are Hindus, the jects, notably Formulare Anglicum, remnant being Mohammedans and or a Collection of Charters, 1702; History of the Exchauer, 1711; Firma Burgi, 1726; and Baronia Anglica, 1736. He was appointed historiographer royal (1714). tance inland. Though structurally the city does not present an imposing whole, Government tho House, Senate House, eathedral, Scottish kirk, Pachayappa's Hall, and Chepauk Palace are all buildings of eonspieuous architecture. Besides Presidency College-the headquarters of the university-there are six missionary and various law, medical, and engineering colleges. Both the Madras and Tan-jore and the Madras and Southern Mahratta lines have their termini here. Over half of the foreign trade of the presidency passes out through the port of M., but its volume is only one-ninth that of Calcutta. In George Town, the husiness quarter, there are cement and eigar manufactories, and eotton-mills, etc. M., or Fort George, eotton-mills, etc. M., or Fort George, as it was then called, was founded by English factors in 1640. It was taken by the French under La Bourdonnais in 1746, but given back two years later by the treaty of Aix-la-Chapelle. During the Soven Years' War it was again blockaded by the French, this time under Lally, but the siege ended in failure (1758). Pop. (1911) 518 660 518,660.

Madrazo y Kuntz, Federico (b. 1815), a Spanish historical portrait painter, son of the painter José de M. He studied at Perie under Winterhalter, and then became court painter at Madrid and professor at the Madrid Academy. In 1873 he was made foreign associate of the Beaux-Arts.

Indigo, to- Jerusalem,' and ' Maria Christina as

Madre de Dios: 1. A riv. in S. America, rises in Peru, flows through Bolivia, and joins the Beni near its junction with the Mamoré. The total length is about 850 m. most of which is navigable. 2. An archi-pelago in W. Patagonia, S. America: is separated from the mainland and from the islands of Chatham and Hanover by Concepcion Strait.

Madrepora, a genus of white stony corals, found from water-level down to great depths in the sea. The common M. of the Devonshire coast is Caryophyllia Cyathus. See CORAL. Madreporite, a structure possessed

by certain echinoderms, as the starfish and sea urchin. It consists of a etc. Nine-tenths of the population plate perforated with numerous small water-vascular system.

Madrid, the cap. of Spain and of the prov. of Madrid. The latter occupies the eastern and southern slopes of the Guadarrama Mts., stretching towards Toledo. The Tagus forms the southern boundary for some distance. The soil is not particularly fertile, the rainfall is deficient, and the rivers are used for irrigation. The forests in the northeastern part of the province provide good timber; in the south-castern district fruit and vegetables are grown. The Sierra de Guadar-rama contains quarries of granite and gypsum. Most of the great railways of the country converge in this province. Its area is 3084 sq. m.; pop. 845,405, 571,539 of whom live in the city of M. The city is bnilt on an elevated platcau merging into the table-land of New Castile. The climate is healthy, but oppressively hot in the summer and bitterly cold in the winter. The central part of the city is almost a square, for-merly surrounded by a wall with fivo gates and eleven doorways, of which three only still exist. The Puerta del Sol forms the centre of M., the largest of all the plazas, with ten streets leading from it. A great deal of the oity is very fine, with well-built houses and broad streets; it is the largest city in Spain, the chief residence of the king, the meeting-place of parliament, the see of an arch-bishop, and the seat of a university. Among the chief buildings are the royal palace, occupying the site of the ancient Moorish citadel; it is built in the Tuscan style of white granite: to the S. of the palace lies the containing one armoury, containing one of finest collections in existence; the the Royal Picture Gallery, adjoining the Salon del Prado, contains nearly 2000 pictures, including works by Titian, Raphael, Velasquez, Vandyck, etc.; Nacional, the Biblioteca founded 1866, contains the national library. over 600,000 volumes and 30,000 MSS., also the archæological museum and the fine arts academy of San Fernando. The churches are not of great architectural merit. The in-

them Majrit. In 1083 Alphonso VI. captured it from the Moors. Charles V. resided there frequently, and Philip II. made the city his capital in 1560 and held his court there.

porcs, and serves as the opening of the | Toledo. There is a wine-growing industry and a trade in leather. Pop. 7000.

Madrigal, a short lyrical poem adapted to the quaint and terse expression of some pleasant thought, generally on the subject of love. The proper M. consists of three verses or strophes, generally bound together by rhymes; but the name is sometimes applied to little love-poems of any form. Among the Italians the best writers of Ms. are Petrarch and Tasso: among the French, Montreuil, Lainez, and Moncrif; among the Germans, Ziegler, Voss, Manso, Goethe, and A. W. Schlegel; and among the English, the poets of the Elizabethan and Caroline ages, such as Lodge, Withers, Carew, and Suckling. The musical M., a piece of vocal music of a corresponding character, was a simple song sung in a rich artistic style, but afterwards with an instrumental accompaniment. and originated with the Flemings about the middle of the 16th century. It went out of fashion about the beginning of the 18th century, but the later gice is a similar composition. The English madrigalists are especially famous.

Madron, a par. and tn. of Cornwall, England, in the St. Ives dlv., 1½ m. N.W. of Penzancc, which is included in the parish. Pop. (1911) 3703.

Madrona Tree, or Arbutus Menziesii, a Californian evergreen (order Evicesen)

Ericacæ). The smeoth trunk and branches are brilliant maroon, the large leaves are dark green, and the wax-white; they are followed by loose clusters of scarlet berries. The tree is slow growing, but attains a height of about 100 ft. The wood yields a fine charceal.

Madura: 1. A dist. of India in the Madras Presidency, bounded on the E. by the Gulf of Manaar. The chief city, Madura, sitnated on the S. bank of the Vaigai R., was for more than 2000 years the religious capital of the Carnatic, and its rulers are spoken of by the ancient Greek geographers. The walls of its ancient fortifications remain, and a large palace, or great temple with pyramidal towers, with numerous Hindu cidifiees, attest the former magnificence of the place. Pop. of city, including cantonnent, 134,130. 2. An island and residency of the Dutch East Indics, separated from Java by the Surabaya Strait. It is mountainous and not particularly fertile, but possesses salt-mincs and large tracts of timber. The only navigable river is the Maringan, and the principal ports are Bangkalau, Sumenep, and Pamekasan. Pop., In-cluding that of the numerous small Madridejos, a tn. of Spain in the cluding that of the numeroprov. of Toledo, and 36 m. S.E. of islands adjacent, 1,773,948.

Madvig, Johan Nicolai (1804-86), a Digest. M. is cited by Papinianus, philosopher, statesman, and classical Ulpianus, and Paulus. scholar, chiefly known for his editing schools. Born in Svaniko, on the pool arising occasionally in a strong island of Bornholm, Denmark, he was ourrent off the island of Moskoe on educated at Frederiksborg (1817) and the W. coast of Norway. It is very at the university of Copenhagen dangerous in winter, especially when (1820-25). F fessor of the L ture at Cope

politician M. was minister of educa- to engulf ships at any time. This view tion (1848), director of public in-later president Mænades, see Bacchæ

in Ciceronis libros demica, 1826; Ad

tremis, 1828; De Asconii Pediani commentoriis in Ciceronis orotiones, 1828; but revised the studies contained in this work in 1839, viz. De finibus bororum et malorum; Cato major et Lælius, 1835; Emendaliones Liviana, 1860; Adversaria critica od scriptores gracos et latinos (1871-84); Latinsk Sproglære til Skolebrug, 1841; and Græsk Ordföiningslære, 1846.

Maebashi, a tn. of Japan, 70 m. N.W of Tokyo, and noted for its silk trade. Pop. 33,000.

Mæcenas, C. Cilnius, a Roman eques, but descended both on his father's and mother's side from the Lucumones of Etruria. His paternal ancestors were the Cilnii, a powerful

ministers of Augustus, and enjoyed for many years the confidence of the latter. But towards the latter years of his life a coolness sprang up between them, and M. rotired entirely from public life. He died 8 B.C. The fame of M., however, rests mainly on his patronage of literature, especially of Virgil and Horace. Virgil was in-debted to him for the recovery of his debted to him for the recovery of his farm, which had been appropriated by the soldiery in the division of lands in 41 B.C.; and it was at the request of M. that he undertook the Georgies. To Horace M. was a still greater benefactor. He presented him with a farm in the Sabine country.

reins. He was one of the legal advisers of Antoninus, and one of the instructors of Aurelius in law. The writings of M., which are mentioned in the Florentine Index, are sixteen books on Fidei-commissa and fourbeen on Judicia Publica. There are forty-four excerpts from M. in the

Maelstrom (Danish malström, of Cicero, Livy, Lucretius, and for his great whirlpool in the sea), usually Greek and Latin grammar books for associated with the celebrated whirl-

> ie tide. Formerly It was supposed it was always dangerous onough

ment. He was Mænura, Menura, Lyre-birds, or beasants, are rare passerine birds, natives of Australia. le bas the long quill feathers ail extraordinarily developed; orotionum Verrinarum libros ii. ex- the two outer are curved outwards and inwards like a lyre, the inner web being broed end the outer narrow. The two middle feathers cross at the

base and diverge; the other twelve feathers have widely separated barbs without barbules. The species are M. superba, M. victoria, and M. alberti. Maerlant, Jacob van (b. c. 1235), a Flenish poet of the 13th century, prohably born on theisland of Voorne. The founder of the didactic school of poetry in the Netherlands, he has been called the 'father of Flemish poetry.' His principal work is the Mirror of History, left uncompleted; and he also wrote Flowers of Nature; The Secret of Secrets; and a poem,

The Lands over the Sea, a summons to the Crusades.

Maeshowe, an earth-covered stone mound, in the island of Orkney, Scotland, 9 m. W.N.W. of Kirkwall. It is entirely artificial, and contains a central chamber, 15 ft, square, built of slabs and blocks of stone. It was first explored in 1861; but the carvings on the walls do not solve the mystery of its origin.

Maesteg, a tu. in Glamorganshire, Walcs, 8 m. S.E of Neath. Chiefly engaged in coal-mining, end has iron-

works. Pop. (1911) 24,977.
Maestlin, Michael (c. 1542-90), a
German astronomier, born at Würtemberg. He settled in Italy for a time, where he became acquainted with Galileo. On his return to Ger-many he received the appointment professor of mathematics of Mæcianus, Lucius Volusius, a Tübingen, Kepler being one of shis Roman jurist, who lived in the time of Antoninus Pius and Marcus Aurelius. He was one of the legal adjusted in the Consideration of Antoninus and Marcus Aurelius. He was one of the legal adjusted in the Consideration of Antoninus and Antoninus an

In Britain they are represented in the

chalk of Trimingham in Norfolk.
Maestro, a wind blowing from the
N.W. around the Adriatic Sea, usually in the summer, foretelling fine

weather.

Maeterlinck, Maurice (h. 1862), a dramatist and essayist of Flemish descent, horu in Ghent, where he was educated at the university. Graduating as a harrister he went to Paris at ing as a harmster he work to raise at the age of twenty-five, and came into touch with the French symbolists Villiers de l'Isle Adam, Le Roy, Verhæren, and Rodenbach, whose ideals won his sympathy and support. His wealth permitted him to ahandon law and take up literature as his lifework, and the volume of verse entitled Serres Chauds appeared in 1889, the play La Princesse Maleine appearing later in the same year. His works came in quick succession. the chief of them being: (Plays) L'Intruse; Les Aveugles, 1890; Les Sept Princeses, 1891; Pelléas and Mélisande, 1892; the famous 'marionette' plays (1894); Aglavaine and Selysette, 1896; Monna Vanna, 1902; Joyzelle, 1903; and L'Oiseau Bleu, 1909; and (Prose) a translation from Ruysbroeck (1891), and from Novalis and Ford (1895); Le Trésor des Humbles, 1896; Le La Sagesse et la Destinée, 1898; La Vie des Abeilles, 1901; Le Temple Vie des Abeilles, 1901; Le Temple Enseveli, 1902; and La Mort, 1912. His work is mystical to a degree, and has earned, needless to say, the scorn of Nordau and Tolstoi. Mirbcau's fanatical critique of M. as a ' Belgian Shakespeare ' no longer calls for ould dishim one

al, most heautiful, and strongest types of genius. His essays show the influence chiefly of Emerson and Novalis, but his plays suggest a fatalistic turn of mind. They are studies in the psychology of terror, of despair, or of some such emotional phenomenon, devoid of action and of dramatic corrections. and strongest types of commonplace; they are not emin-ently suited for the stare, although they have often met with a good reception when staged. Debussy's setting of Pelléas is one of the greatest of modern operas. See works by Ed. Thomas (1911); Mde. Maeterlinck (Contemp. Review, Nov. 1910), and Arthur Symons, Symbolist Movement in Literature.

Mafeking, a tn. in the N. of Cape of Good Hope, and the centre of the protectorate of British Bechuanaland. Pop. (1904) 2713. It is situated in a gold-mining district. M. is particularly remembered in connection with 16,000.

part of the uppermost subdivision of the siege it underwent during the the Cretaccous system, and abound Boer War of 1899. It was gallantly in the remains of corals and Polyzoa. defended by Colonel Baden-Powell, to whose resource and courage was due the fact that it was able to hold out against the investors for seven months, until it was relieved by Colonel Plumer with regulars and soldiers of the Rhodesian forces. The investment was followed with the closest interest in England, and on the receipt of the nows of the relief London gave itself up to rejoicing of unaccustomed spontaneity. here Jameson in 1895 set out on his unfortunate exploit on hchalf of the Reformers.

Maffei, Francesco Scipione Marquese di (1675-1755), a famous Italian scholar and author, horn at Verona. He first adopted the military profes-sion, but abandoned this for literature. His tragedy Mérope produced in 1713 was highly estecmed. In 1731 appeared his principal work, Verona Illustrata (2 vols.), treating of the origin, history, and literature of Verona. He also wrote Introduction to the Science of Mathematics. His complete works were published in 1790.

Maffersdorf, a manufacturing tn. of Bohemia, 57 m. N.N.E. of Prague. Has breweries and carnet works. Pop.

6908.

Maffia, a dangerous secret seciety of Sicily which, from one point of view, represents a 'sort of rough popular justice and a degenerate chivalry,' but which, in its worse aspect, is no more than a gang of criminals and ratteners opposed to all established order or government, and organised, like the Camorra, for the purpese of securing immunity for its members from the consequences of crimes.

Mafra, a tn. in Estremadura, Portugal, 18 m. N.W. of Lishon. Noted for its great and beautiful pile Mafra, of huildings erected in imitation of the Escorial of Spain by John V. in 1717-31. The huildings include a church, royal palace, monastery, and

College. Pop. 4800.

Magadha, in ancient India the name of the kingdom of Prasii, the capital of which, Palibothra (Sanskrit Pataliputra), was situate on the Ganges. The Greek knowledge of this kingdom was probably derived from the expedition of Seleucus against Sandracottus, king of M Magadoxo, Mukdisha, or Mogdishu,

a maritime tn. of Italian Somalliand, E. Africa. Has au active export trade and remains of mediæval Moham-

medan architecture. Pop. 10,000.
Magaldan, a pueblo of Luzon Is.,
Philippines, 19 m. from Bacelor. Pop.

Magalhães, Fernao de, see MAGEL-

LAN, FERDINAND.

LAN, FERDINAND.
Magallanes, a ter. of Chili, comprising the whole of the coast strip S. of 47° S., i.e. between the Gulf de Penüs and Cape Horn, and all the islands except half the island of Tierra del Fuego and Staten Is. Mountains and forests occupy the porthern part. desplate and strip. of northern part; desolate and sterile pampas plains, abounding in lagoons and salt marshes, the southern part. Capital, Punta Arenas on Strait of

Magellan. Pop. about 18,000.
Magazines. This term is usually applied to periodical publications which deal with general or particular subjects in literature or art, and often contain stories and poems. The modern M. dates from 1731, when Cave published the Gentleman's Magazine, which continued until 1907. This was followed by the Scots Magazine in 1739, afterwards called The Edinburgh Magazine, and Blackwood's Magazine in 1817, the latter having a great influence owing to its criticism of the topies of the day. Fraser's Manager of the topies of the day. Fraser's Manager of the day. Fraser's Manager of the topies of the day in the first of the 19th century that the price of Ms. was reduced from two shillings and sixpence to one shillings. the first one published at this price being Tait's Edinburgh Magazine (1832), thus marking a new era in their history. Among the other Ms. mer mistory. Among the other Ms. published under these conditions were Temple Bar and the Cornhill, the latter edited by Thackeray. These were followed by many others, the price eventually being reduced to sixpence when Longman's Magazine of 1882 was sold for that price, tollowed by Barting of That of 1882 was sold for that price, followed by Review of Reviews, published in 1890, and the Strand Magazine in 1891. In America the illustrated Ms. are to the fore and eclipse those of other countries; Harper's, Scribner's, The Century, Munsey's, scriner's, The Century, Munkey's, and McClure's being among the number. In France the Revue des Deux Mondes holds a high place as a critical review, while there are numerous Ms. published in the other eountries of Europe.

Magdala, a hill-fortress of Abys-

sinia, stood on the plateau of Talanta at an altitude of 9110 ft.; it was the

in a large delta, enclosing the small monasteries passed into the hands of island of Los Gomez, and is closed to Lord Audley, whose representative,

sea-going vessels by reason of a large bar at the mouth; goods are conveyed by rail from Barranguilla to the point whence the river is navigable. The total length of the M. is 1060 m. 2. A small the in the Argentine Republic, situated on the Rio de la Plata, 52 m. S.E. by E. from Buenos Ayres. Pop. 4000.

Magdalen College, one of the colleges of the University of Oxford: was founded in 1458 by William of Waynflete, who had held the post of Lord High Chancellor of England. The building was begun in 1474, and is considered the most beautiful of all the Oxford colleges. The tower is one of the most interesting features of the college, and it is from the top of this that a Latin hymn is sung on May Day morning. A new quadrangle was built on to the college in 1885 Magdalen Walks, part of which is known as Addison's Walk, round an island in the Cherwell, are also famous. was during the time of James II. that this college came so much to the fore in its resistance of the king's choice of a president. Cardinal Wolsey, John Lyly, Hampden, and Addison are among its former members.

Magdalene, or Magdalen, Mary, the name of a woman mentioned in the Gospels as a disciple of Jesus (Luke viii. 2). It is recorded that seven demons were east out of her. She apparently came from Magdala or Magadan (modern El-Mejdel), near Tiberias. She witnessed the erneifixion of Christ, followed Him to burial, and prepared sweet spices for the sepulchre. The account in John xx. tells how she found the tomb empty, and was the first to behold the riseu Jesus (see also Mark xvi. 9). From confusion with the woman who anointed Christ's feet in Simon's house (Luke vii. 37), the popular conception of her bas been that of one fallen from chastity who later repented of her sins. Hence the name Magdalene Asylums' was adonted for homes for penitent women, and the word 'maudlin' (weeping-eyed) is derived from this same unfounded idea. There are many famous pictures of the Magdalene by Correggio, Titian, Paul Veronese, and others. She has also been confused with Mary of Bethany, sister of Lazarus, and with

at an altitude of 9110 ft.; it was the the stronghold of Theodore, and in 1868 wo was taken and destroyed by the British under Sir Robert Napier, afterwards Lord Napier of Magdala.

Magdalena: 1. The chief river of Colombia, rises in the Central Cort Walden. In 1428 a Benedictine studilera and unites with the Cauca, 130, dent's home had been erected on the form the Caribbean Sea. It ends eith which on the discountion of the dillera and unites with the Cauca, 130, dent's home had been creeted on the m. from the Caribbean Sea. It ends site, which on the dissolution of the

the owner of Audley End, still has the an English prelate, born at Cork, and the owner of Audiey End, som has one an English premote, born as cors, and power of appointing the master of the educated at Trinity College, Dublin college consists of a master, seven fellows, and the students. The most interesting and valuable possession was an active organiser of the Church of this college is the libraring some MSS, and books by Samuel Pepys, who was

students. Magdalen Hall, Oxford, was founded by William of Waynflete, close to Magdalen College, with which it was connected. In 1602 it became an independent hall, and in 1822 its menibers were moved to the premises now occupied by Hertford College. In 1874 the hall was dissolved, and its fellows and students became incorporated as Hertford College.

Magdalen Islands, in Quebec, Canada, are situated the St. in Lawrence, and include Coffin's Is., Saunders, Wolfe, and Amherst. The ebief industry is fishing, eod, mackerel, and halibut being found in abundance.

Pop. 5172.

Magdeburg, eap. of Prussian Saxony on the l. b. of the Elbe, 88 m. (by rail) W.S.W. of Berlin, is one of the chief fortresses of Prussia. The city is im-portant commercially, and it includes within its municipality the former towns of Neustadt, Sudenburg, and Buckan. With the exception of one fine boulevard, the Breite Weg (or Broadway), the streets are uneven and narrow. Its cathedral, a noblo Gothic edifice, dates from the begin-ning of the 13th century, and con-tains the tombs of Otho the Great and his English wife, the Princess Editha. Here also is the mausoleum of Ernest, Archbishop of Saxony, the masterpiece of Vischer of Nuremberg. principal manufactures include woollen, silk, and cotton goods, tobacco, gloves, leather, chicory, sugar, and vinegar, and there is a large trade in chemicals, cereals, and fruit. The town was founded by Charlemagne about 805, and a Benedictine monastery was established here in 937, tion, and is enclosed on the W. by which in 968 was raised to tl of an archbishopric. Dı

fell, however, and was sacked and burnt, some 30,000 of its inhabitants perishing; the eathedral was the only important building to escape de-The archbishopric was converted into a duchy in 1648, and was presented to Brandenburg. Marshal Ney captured the city in 1896, but it was restored to Prussia in 1814. pp. 279,644. Magendie, François (1783-1855), a Magee, William Connor (1821-91), eelebrated French physiologist and Pop. 279,644.

riety, and as a debater and few equals. He published

and the Age, and The See Macdonnell, Life and A tonement.Correspondence.

Magee Island, a peninsula in Ireland, co. Autrim, nearly separated from the mainland by Lough Larne. Magellan, Ferdinand (Portuguese Fernao de Mazalhães) (c. 1470-1521), a celebrated Portuguese navigator, born probably at Villa de Sabrosa, Tras-os-Montes, and the discoverer of the Strait of Magellan and the Philippines. He was distinguished for his skill and enterprise, and served under Albuquerque in the East Indies for several years, taking part in the capture of Malacca (1511). Considering his services were not properly

him and gave him command of a fleet of five vessels, and ho set out in 1519 to discover a western route to the East Indies. He was the first navigator of the Pacific Ocean, so called by him, and on his voyage also discovered the strait which bears his name, and the Ladrones. He met his death in the Philippine Islands, where he became the ally of the Prince of Cebu, one of the smaller islands, against the prince of another little island of the group. M. was killed in the battle of 1521. One of his ships returned to Spain. and was the first to eircumnavigate

the globe. Magellan, Strait of, between S. America and Tierra del Fuego, 360 m. in length, and varies in width from 21 to 17 in. It was discovered by the Portuguese explorer Magellan in 1520. The strait is difficult of naviga-

middle ages M. joined the
League. The city suffered severely of nebulous hight near the S. pole of
during the Thirty Years' War, and
gallantly held out for nearly seven Andrea Corsali, in 1516, after Magelmonths when invested by Tilly. It
lan. The Major is formed in the conlan. The Major is formed in the con-stellation Dorado, and the Minor is situated in a blank space between Hydrus and Toucan. The greater The greater number of the variable stars of the heavens are found in these clouds. The greater nebula covers an area of about 42 square degrees and the lesser about 10 square degrees, according to Herschel.

physician, born at Bordeaux, and Medians which were set aside for the educated at Paris. de Physiologie, appeared in 1816. In 1821 he became a member of the Academy of Sciences, and ten years later professor of anatomy and medicine in the Collège de France, where he became noted for his experiments on the physiology of the nerves. Among his most important works are Lectures on the Physical Phenomena of Life, and Lectures on the Functions and Diseases of the Nervous System. He was also the founder of the Journal of Experimental Physiology.

Magenta, a tn. in Lombardy, Italy, 15 m. W. of Milan, noted for the great battle fought there in 1859 between the altied French and Sardiniums and the Austriaus, in which the former were victorious. Pop. 8000.

Magenta, see Fuchsine.
Magero Island, near the coast of Finmarken, Norway, in the Arotic Ocean. It is irregular in outline and terminates on the N. in North Cane, the most northerly point of Europo. Pop. 32,596.

Magersiontein, a battlefield, the scene of British defeat in Boer War, 1899, in the W. of the Orange Free State, S. Africa, near the Modder R. Maggiore, Lake (the Lacus Verbanus of the Romans), in N. Italy, is bounded to the Modern Lands of the Research of the Research

by Piedmont, Lombardy, and the Swiss cauton Tieino. It is 39 m. in length and of an irregular shape; the greatest depth is 1230 ft. The R. greatest depth is 1230 ft. The R. Tioino flows through the lake, which is traversed by steam packets. the south-western portion are the be south-western portion are the Borromean Isles; on the N. and W. it is enclosed by high mountains, and on the S. and E. by vino-covered slopes. Maggot, lie grub or larva of a fly or other insect halching from an egg

deposited in its food supply. The term is unscientific, but is usually applied to legiess larvæ, such as those of the blue-bottle and green-bottle flies; one of the latter is the well-known sheep M. The Ms. of fruit include a large number of insect types. The Ms. found in plant galls are those of the gall wasps.

Maghera, a par. and tn. of Londonderry, Irelaud, 141 m. N. of Cooks-There are manufs. of sewed muslins and linens. Pop. (1911) 6900.

Magherafelt, a par. and market tn. of Lundonderry, Ireland, 7 m. S.E. of Maghera. There is a shirt factory and maunif. of linen. Pop. (1911) 4200.
Maghiana, or Jhang Maghiana, a
tn. of British India, in the Punjab,
90 m. N.N. E. of Multan. Pop. 11,000.

Magi (derived from mag or mog, the early traditions of polivi: priest; mikguth, a man who races and fostered by the ver wears his hair in a particular manner; if childish hope of penetra mogh, distinguisher), a tribe of the mystery of Nature's laws.

His manual of management of the sacred rites, and physiology, entitled Précis étémentaire for the preservation and propagation de l'hysiologie, appeared in 1816. In of the traditional knowledge. From the Medians, the institution of the M. found its way, under Cyrus, into Persia. They were not only the keeners of the sacred things, the learned of the people, the philoso-phers and servants of God,' but also diviners, mantics, augurs, and as-trologers, and no trausaction of importance took place without against their advice.

Magic, a word of sacerdotal origin. being derived from the Mngi, the name, according to Herodotus, of certain priests of the Medes and Persians who formed one of the six Median tribes. Their earlier functions were divinatory or prophetic, but later, in the Persian court, they sank to the level of mere occultists or magicians. It is hardly necessary to point out how closely akiu M. is to superstition, the belief in it as the art of exoreising spirits or producing supernatural effects by means beyond the comprehension of the credulous being as deep-seated in the psychology of races low in the scale of civilisation as any belief in extra-nundane influence. The patronage accorded by fashionable if neurotic ladies and others to West End palmists and spiritualists, proves that even in this most advanced stage of civilisation many people in certain circumstances will seek solace in pretended M., though in this con-nection it is to be observed that in spite of criminal prosecutious and palpubly exposed frauds, there are undeubtedly well authenticated and apparently preternatural phenomena that do require explanation; a fact that is supported by the writings of many alle psychologists. e.g. Sir Oliver Lodge and Loubruso. It is Oliver Lodge and Lombraso. difficult to account for the origin of Tylor (Enrly History of Munkind) attributes the cartiest practice of M. to the belief in an objective connection between two things—a man and a rude drawing of him, or two events, the death of a child and the great hawk's nocturnal cry-when in truth the councetion could only be subjective. This theory seems alto-gether inadequate, for it is really the genesis of the objective ennnection itself that requires explanation. It seems more correct to say that all such connections are due to some unreasoning as-nelation of ideas from a more synchronisation; which association has become stercotyped in the early traditions of particular races and fostered by the very natural if childish hope of penetrating the

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tions of The expression black M. or the black art or M. proper, is that branch of M. which was practised with evil intentions generally by 'unofficial' persons, like witches or sorcerers. At the present day it is a synonym for the conjuring tricks of clever incchanical illusionists like Messrs. Maskelyne and Devant. In contradistinction to black M., whito M. connotes the altruistic practice of M. This opposition is exemplified in the mediæval beliefs in good and bad fairies; for example, in the rustic superstition that some kindly disposed clf had churned the milk overnight, or an ill-disposed one dropped a mouse in the cream. term magic square is applied to a square figure formed by a set of numbers arranged in such a manner that the vertical, horizontal, and diagonal columns shall give the same Such squares were universally believed to possess astrological qualities. The term enchantment. which is derived from Latin in canto (to repeat a chant or charm over), denotes the practice of enthralling another bу eharms or soreery. Doubtless hypnotic suggestion would be looked upon by lower races as An obvious applicaenchantment. tion of white M. is the healing of disease by sorcerers, and, indeed, generally M. among early Oriental varic... and

Victoria; rs in Polynesia) had, and has, over and above its spiritual or sacerdotal significance, this utilitarian aspect; the healer, however, whether consciously or unconsciously, performing his 'miracles' of eure by some homely and efficacious remedy, e.g. by sucking out the poison from a wound, and not by the instrumentality of

M. at all.

Brough

Magic Lantern, or Optical Lantern, an apparatus for projecting upon a white screen enlarged representations of diagrams, pictures, etc., drawn or photographed on glass slides. The instrument is said to have been invented by Athanasius Kircher, who described it in 1646. It was at first used as an amusing toy, but in its later developments is a means of representing small pictures and objects to large audiences. The einematograph is essentially an optical lantern. The instrument consists of a lantern body to contain the source of light and the reflectors, an optical system, and a slot to accommodate the

exhaustive collection of curious peasant and other heliefs that have come down through the folklore of various rand's popular rand's popular responsible to the object, and an 'objective,' which transmits the rays from the light to the object, and an 'objective,' which receives the rays from the object and transmits them to the was practised with evil intentions of the light to the object and transmits them to the object and transmits them to the object and transmits them to the object and transmits them to the object and transmits the object a

screen.

Magic Squares, sets of numbers arranged in the form of a square in such a manner that the sum of the numbers in each vertical and horizontal column and in each diagonal is constant. The following may serve as examples of their construction:

2	. 1	5	3	4
3	4	2	1	5
1	5	3	4	2
4	2	1	5	3
5	3	4	2	1
		FIG. 1		
15	5	0	20	10
0	20	10	15	5

15 FIG. 2

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of

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In Fig. 1 the numbers 1 to 5 are arranged in any order in the first row; the second commences with the number in the fourth cell of the first row and proceeds in the same relative order. The third row commences with the number in the fourth cell of the second row, and proceeds in order, and so ou. Fig. 2 consists of the numbers 0 to 4 multiplied by 5, and each row starts with the number in the third cell of the row above. If now the numbers in the cells of Fig. 1 be added to those in the corresponding cells of Fig. 2 the result is a M. S. as in Fig. 3.

17	6	5	23	14
3	24	12	16	10
11	20	8	4	22
9	2	21	15	18
25	13	19	7	1 :
		77.0 2	<u></u>	

FIG. 3

in the tnp row and making corresponding changes in the other rows, a large number of such M. S. can be obtained by successive additions.

Magilp, a medium for oil-colours. It is composed of linseed oil and a preparation of mastic, the gummy

exudation of the lentisk.

Magilus, a gastropod molluse, parasitic in live corals in tropical seas. To keep pace with the growth of the coral, it lengthens the aperture of its normally spiral shell into an elongate tube, which is sometimes found 15 in. long. The tuhe, except at the extremity, becomes filled with lime and is very heavy

Magione, a vil. of Central Italy, 8m. W.N.W. of Perugia. Pop. (com.) 8000.

Magister Equitum (master of the horse), a Roman official in command of the cavairy in the time of the kings. In the time of the republic the office only came into force when a dictator was appointed.

Magistrate, see JUSTICE OF THE

PEACE.

Magliabecchi, Antonio (1633-1714), an Italian librarian and bibliomaniae, born at Florence, famed for his vast and varied knowledge of languages and antiquities. For many years he was librarian to Cosmo III., Grand Duke of Tuscany, and to his successors. At his death he left his collection of manuscripts and early editions to Florence, and it now forms part of the National Library of that city.

Maglie, a tn. in the prov. of Lecco, Italy, 19 m. E.N.E. of Gallipoli. Pop.

850Ő.

Magna Charta, or The Great Charter. the famous document granted King John at Runnymede to the barms in 1215, viewed in after times as the basis of English liberties and described by the historian Hallam as the 'keystone of English liberty.' Its great underlying principle is that the king must keep the law. John's oppressions and tyranules aroused the barons to take up arms to redress their grievances, their demands being on the charter voluntarily granted by Henry I. In addition, it contained sixty-three clauses embodying provisions for the protection of the rights of feudal proprietors and against the abuse of the royal pre-rogative. Its principal provisions were the redressing of a number of grievances connected with feudal tenures: pravisions regarding the re-lief of heirs, wards, and marriage of the widows of tenants in-chief; the inviolability of the liberties of the City of London and other ports and towns; freedom of commerce to foreign merchants; the strict administration of justice; the permanent

By altering the order of the numbers abode of the Court of Common Pleas at Westminster: the holding of assizes in the different counties, and the establishment of assizes; the abolition of extraordinary taxatinn; the pro-tection of life, liberty, and property; one standard of weights and incasures; no banishment or imprisonment save hy judgment of peers. See M'Kechnie, Magna Charta, 1905.

Magna Charta Island, 2 m. N.W. of Staines, in the Thames. Surrey, England. It was the site of the signing of Magna Charta by King John in 1215.

Magna Græcia, the name given by the ancient historians and geographers to the Hellenie settlements of phers to the rieneme scomments pre-Roman times in the S. of Italy. They included Brutium, Lucania, Applia. and Iapygia. Important citics were Tarentum and Cuma. The Greeks colonised extensively in the Mediterranean, but the term Magna Gracia was exclusively used to denote those settlements in Southern Italy not including Sicily, which was a scparato colony. Of all the cities of M. G., Tarentum was the most important, and lent its influence to the other towns under the Hellenie elvilisation. The best part of the history of M. G. may be studied in the history of Tarentum itself. The city was supposed to have been founded by Taras and some colonists from Crete, but it is historical knowledge that the original migration was reinforced about 700 B.C. by settlers from Sparta. Situated in the S.W. part of Iapygia, Tarentum became, owing to its industry and commerce, one of the most important and, at the same time, one of the most effeminate citics of M. G. Later, Tarentum, with most of the other Hellenie cities of

Italy, came under the sway of Rome. Magnesia: 1. Magnesia ad Mæandrum, an ancient city of Ionia, Asia Minor, 10 m. N.E. of Miletus, near the Meandor. Until it fell into the hands of the Romans it was a wealthy and prosperous city. It was destroyed by the Cimmerians about B.C. 700, and here Themistocles, the Athenian patriot, died, B.C. 449. 2. Magnesia ad Sipylum, a city on the Hermus, near Mt. Sipylus, N.W. of Lydia. Beside this town Scipio defeated Antiochus of Syria, in 190 R.C. Its modern name is Manissa, and it contains 50,000 inhabitants 3. A div. in ancient Thessaly, along the E. coast, with Mr. Pelion and Mt. Ossa on its borders 4. A nomarolly or prov. of modern Greece. Pop. 183,000.

Magnesia, see Magnesium.

Magnesian Limestone, a formation occurring in the middle division of the Permian system. It consists of a bed of brown shale with hands of marl slate and a superposed zone of of the Permian system in the E. of England and is represented in the W. by discontinuous functiones and sandstones. The term M. L. as a rock is applied to dolomite. a mineral crystallising in octohedra and consisting of calcium and magnesium carbonate.

Magnesite, a mineral consisting of magnesium carbonate (MgCO₂). It is usually included among calcites, and usually inclined among consequences in the with in three forms, crystalline, massive, and earthy. The crystals occur in rhombohedra, and have a beadance of 4 and a sp. gr. of 3. The hardness of 4 and a sp. gr. of 3. The other forms are white in colour and are often mixed with meerschaum or other magnesium salts. The mineral is mined in Eulopa, Madras, and California, and is used for fire bricks, as a manufacture of source of magnesium salts, and as a

Magnesium, in chemistry, a metallio eiement, di-valent; symbol Mg, atomic weight 24.3. The substance was first known in the form of the sulphate, or Ensom salts; in the 18th century the oxide, or magnesia alba, was prepared, and was at first thought to be chemically identical with lime. In 1808 Davy demonstrated that magnesia was the oxide of a metal; the metal was obtained in a fairly pure state by Bussy 1829. M. occurs in the form of carbonato in magnesite, dolomite, and magnesian limestone; it occurs as sulphate in sea water and some mineral waters, as at Epsom in Surrey, and Seidlitz in Bohemia, also as the mineral kiescrite; it occurs as ehlo lde in the mineral carnallite at Stassfurt: It also enters into the composition of many silicates, as hornblende, tale, olivine, asbertos, and

presence of metallic sodium. impure metal thus obtained is then sublimed and the product pressed into the form of ribbon. The metal may also be separated from the chloride by electrolysis; the cathode is a metal vessel heated externally, and the anodo or carbon rod passing into a porcelain cylinder, from which the M. is a lustrous white metal of specific gravity 1.75 and melting-point 632.7. It is malleable and ductile. When heated in air it burns with great brilliancy, forming the oxide MgO, a white powder slightly soluble in water and very infusible. When the metal burns in chlorine, the chlorido

MgCl, is formed. It may also be
prepared by the action of hydrochloric acid on magnesia, or magnesia, such a needle is placed with its axis sium carbonate. isolide resemble the chloride; they are ridian, the north-seeking pole will tilt

dolomitc. It is a characteristic feature' soluble in water and occur in seawater. The sulplinte, formerly obtained from the springs at Epsom, is now obtained from the mineral kicscrite; the salt is fairly soluble in water. M. is used in photography for producing a brilliant light rich in chemical rays; it is used for a similar purpose in pyrotechny. The salts are useful purgatives. The sulphate, or Ensom salts, is most commonly employed, and acts by virtue of abstracting water from the tissues into the howel; the stronger the solution, the more water is thus abstracted. Fluid magnesia is an aperient prepared by dissolving the carbonate in water impregnated with carbon dioxide, Citrate of magnesia, a popular effervescent aperient, consists of a mixture of blearbonate of soda with tartaric and citriencids with a small proportion of Epsoin salts. Magnetic Belts, see ELECTRICITY

IN MEDICINE.

Magnetic Pole and Units, see ELEC-

TRICITY - Magnetism. Magnetism, Terrestrial. The fact that a freely suspended magnet touds to take up a position approximately coincident with the geographical meridian seems to have been known to the Chinese in very carly times, and compasses of a sort were omployed in Europe in the 12th century Columbus is said to have discovered that the direction of the compass is not true geographical N. and S., and that the declination or variation is different in different places. The placnonienon of dlp or inclination was noticed in the 16th century, and secular variations in dip were recorded towards the cud of that century. The importance of the magnetic properties of the earth was realised by navigators, and it is to sailors and those concerned with nautical matters that most of the investigation and records of magnetic phenomena are duo. By series of observations at different points on the earth's surface it has been possible to chart the magnetic elements poculiar to a locality and thus afford the necessary aids to correction for mariners. The earth, in common with all magnets, has a chlorine is liberated by a side-tube. N. and a S. pole, and the regions between them constitute part of a magnetic field whose characteristics are partly shown by 'lines of force.' In determining the magnetic conditions at any place we have to consider the three elements: dlp or inclination, Dip

The bromide and at right angles to the magnetic me-

downwards at an angle with the hori-I zontal which increases as it is moved towards the N. magnetic pole. At the N. magnetie pole, which is situated in the N. of Canada about 97° W. long. and 704° N. lat., the needle will take up a vertical position with its northseeking pole downwards. At the S. magnetic pole, situated probably about 150° E. long, and 73° S. lat., the needle will be vertical with its southseeking pole downwards. Between these positions there is a line called the magnetic equator where the needle remains horizental. The magnetle equator is by no means coincident with the geographical equator, and similarly, lines of equal dip do not coincide with parallels of latitude. and are not parallel to each other. When a necdle is suspended or pivoted so as to be free to move in a horizontal plane, as in the mariner's compass, it takes up a r

N. and S. In

the long axis some degrees E, or W, of the true N. The extent of this variation is called the declination, and charts showing the declination at most points on the earth's surface are of great use to mariners. The lines joining places of equal declination on such a map are called isogonal lines: the lines joining places of declination 0° are called agonic lines. An agonic line starts from the N. magnetic pole, crosses Canada and the United States, the eastern part of S. America, and pursues a fairly regular course to the S. geographical pole; it then becomes an Isogonal of 180° until it reaches the S. magnetic pole. An agonic lino then crosses the Antarctic Ocean, the western part of Australia, takes a bend westward to the Arabian Gulf, crosses Russia, and goes to the N. geographical pole, after which it bocomes an isogonal of 1:0° until it reaches the N. magnetic polo. There is also an agonic line tracing out an oval course in the eastern part of Asia; within this oval the declination is westerly, outside it there is an easterly declination. The construction of declination charts for fairly permanent use is rendered difficult from the changes which occur in the declination from time to time. Recordsextending from the 16th century show that there is a secular change in declination: thus the declination at

Greenwich the declination is to the E. of its mean position in the early hours of the day, the maximum variation in this direction occurring at about 8 a.m.; it then becomes more westerly until the maximum variation to the W. of the mean declination occurs about two hours after noon. In addition to these periodic variations in declination, there are irregular variations which make the task of determining the mean declination a difficult one. Magnetic disturbances of this kind are found to bear a relation to sun-spot frequency, and also to displays of aurora borealis. The state of present-day knowledge of the causes of magnotic phenomena is, however, too inadequate to satisfactorily explain the connection.

Magnetite, a mineral consisting mainly of black oxide of iron, Fc.O. It is identical with loadstone, and is famous under that name for its magnetic qualities. It occurs as crystals in the cubic system, having a hardness of 6 and a specific gravity of 5; it is black and opaque, and has a nictallic Instre. It is widely distributed, entering into the composition of many volcanic rocks, and is valu-

able as an iron orc.

Magneto - electric Machine. see DYNAMO.

Magneto Ignition, see MOTOR CARS. Magnetometer, see MAGNETISM.

Magnificat, the song of thanks-giving of the Virgin Mary, incor-porated into the evening service of the Anglican Church, to be said or sung after the First Lesson. Its use in the Church service dates back to about the 6th century.

Magnifying Glass, see LENSES.

Magnitude, in astronomy, the brightness of a star. The term was used in the form µέγεθος by Ptolemy. who published a catalegue of the stars visible in the northern hemisphere, and divided them into six classes eccording to their brightness. with which was naturally associated some idea of their relative size. The six Ms. of Ptolemy were arranged with the brightest in the first M., and proceeded to the sixth M., or least visible stars. He also introduced some measure of subdivision, attaching the symbol a to the M. of a star if it excceded the average of its class, and attaching the symbol e if it was below the average in brightness. Many attempts have been made to catadeclination; thus the declination at the average in brightness. Many London in 1580 was 1° E., in 1631 it attempts have been made to eatawas 4° E., in 1657 it was nil, in 1692 it logue the stars with respect to M., and was 6° W., and showed an annual the following is given as the result increase until 1818, when it was of observations on the numbers 24° 38' W., since then the declination and M. of stars between the N. has decreased to about 16° W. at the pole and 35° S.: 1st M., 14° 2nd present time. All the magnetic clo- 10° M., 48° 3rd M., 152° 4th M., ments show variation from the mean 313° 5th M., 85° ; 6th M., 2010° values during the solar day. Thus at 1° It is estimated that the numbers of stars required to give the same light as a star of the first M. are as follows, counting from the first M. to the sixth: 1, 2½, 6, 16, 40, 100.

Magnolia, a large genus of hardy and half-hardy deciduous and evergreen flowering trees and shrubs with fragrant solitary flowers. M. grandiflora is a fine evergreen tree attaining a great height in America. M. stellata is a small shrub with an abundance of white star-shaped hlooms, which appear in April. M. conspicua, the Yulan, bears large water-lily-like, very fragrant flowers on leafless twigs in March.

Magnoliaceæ, a natural order of trees and shrubs, divided into two tribes: Magnoliæ, with earpels in a cone, and Winteræ, with carpels in a

single whorl.

Magnus, the name of the kings of Norway, among whom may be mentioned:

Magnus the Good (1035-47), who became king of Denmark also in 1042,

was a son of St. Olaf.

Magnus the Barefooted (1993-1103), born in 1073. He subdued the Orkneys and the Hebrides, but was killed while on an expedition to Ireland.

Magnus the Lawgiver (c. 1263-80), born in 1238. He constituted himself a reformer of the laws of his country, compiled laws for Iceland, and made

the crown hereditary.

Magnus Eriksson (1319-63), King of Norway and Sweden. In 1343 Norway was given to his son Haakon, and in 1363 ho himself was forced to give up the throne to Albert of Mecklenburg. Ho died in 1374.

Magnus, Olaus (1490-1558), a Swedish ecclesiastic, brother of Johannes M., arehbishop of Upsala in the 16th century. He was nominated archbishop of Upsala after the death of his brother, but never took up his episcopal position, and died in the monastery of St. Brigid in 1568. M. is best remembered for his historical writings. His History of the Goths, Swedes, and Vandals is his best known work.

Magnus, Sir Philip (b. 1842), an educationist, born in London, and educated there and on the Continent. In 1880 he became director and scercary of City and Guilds of London Institute, which appointment he held for eight years. He is now scercary for the Department of Technology of the same institute, and has also been M.P. for London University since 1906. Among his numerous writings on educational subjects may be mentioned: Lessons in Elementary Mechanics, 1892 (new ed.); and Manual Training in English Schools, 1890.

Magnusson, Arni (1663-1730), a Norse scholar, boru in Iceland. After studying in Copenhagen, he acted for a short while (1701-2) as professor of philosophy in the university there. Subsequently he travelled through Iceland (1702-12), making a collection of northern antiquities and old Icelandic MSS. This valuable collection, a great part of which was destroyed by fire in 1728, is preserved in the Copenhagen University. See Catalogne, with Memoir, by Dr. Kr. Kaalund (1888-94).

Magnusson (or Magnussen), Finnur (1781-1847), an archaeologist, born at Skalhott, Iceland. In 1815 he was appointed professor of literature at the University of Copenhagen, and remained at that university until his death. Among the works which he edited are: Edda Sæmundar, 1787; with C. C. Rafn. Grönlands Historiske Mindesmærker, 1838; with C. C. Rafn and others, Antiquites Russes, 1850. He wrote Eddalæren og dens Oprindelse, 1824-26, among

other works.

Mago (a. 203 B.C.), a Carthaginian soldier, the youngest son of Hamilear Barca and brother of Hamileal. He took part in Hamileal's great campaign in Italy (217-216 B.C.), and in 216 was despatched to Carthage with the news of the battle of Canne. He then joined his other brother, Hasdrubal, in Spain, where he carried on war for many years. He was defeated by M. Junius Silanus in 206, and at Silpia by Seipio Africanus in 205. The Carthaginian government forthwith ordered him to invade Liguria (205-203 B.C.), and he died of his wounds on his voyage back to his native eity.

Magoi, see Gog and Magog. Magpie, the familiar name of several species of Pica, a genus of passeriform birds belonging to the family Corvide. P. caudada, the commonest species, is known all over Europe, and extends through the Palearctic region: it can easily be tanned; P. nuttalli, a native of California, is distinguished by a bright yellow bill and a naked blue spot behind the eye.

Maguay, Maguey, or American Alos (Agave Americana), a tall plant with large fleshy spiny leaves. Several varieties are cultivated. See AGAVE.

Magus Muir, a reclaimed moorland situated about 3½ m. W. of St. Audrews, Fifeshire, Scotland. It was here that Archbishop Sharp was murdered in 1679.

Magwe: 1. A dist. of Upper Burma in the Minbu div. The Irawadi forms its western boundary. The soil is fertile, and rice, cotton, maize, etc., are grown. Area 2915 sq. m. Pop. 247,000. 2. The cap. of above dist., on

the Irawadi R., 70 m. S. of Pagan. | conferred upon him hy various uni-

Pop. 6500.

Magyars, dominant race of Hungary, constitute a branch of the Finno-Ugrian tribe, and came originally from the plains E. of the Carpathians. About the year 896 they descended into the Moravian realm, under the leadership of Arpad, tho great national hero, and caused great devastation and pillage, until they were driven back by the Germans in the 10th century. After this they settled down to a more peaceful exist-ence, embraced Christianity, formed laws, and made rapid advances in civilisation. There are other races in Hungary. Servians, Wallachs, in Hungary, Servians, Wallachs, Ruthenians, Slovaks, and Germans, but the M. take the most prominent part in public affairs, and the language spoken is of Finnish derivation.

Mahabaleshwar, tho chief hill-station of Bombay, on the eastern slope of the Western Ghats, founded as a sanatorium in 1828. It is situated on a ridge about 4500 ft. high, 74 m. S. of Poona. Near the foot of the hill

is probably a generic name; it bears all the marks of being a compilation, for its contents are heterogeneous in the extreme. The leading story relates the contests hetween the Kurus, representing the spirit of evil, and the Pandus, representing the spirit of good. The temporary triumph of evil is shown by the ad-versities of the Pandus, while their ultimate renunciation of an earthly for a heavenly kingdom signifies the final victory of good. The text was first printed in 1834-39 in Calcutta. There is an English prose translation
hy Protap Chandra Roy (1883). A
comprehensive cdition, comprising
the Sanskrit text and both Hindu and

be English translations, was commenced to at Moradabad in 1902.

Mahadeva, see SIVA.

Mahaffy, John Pentland (b. 1839), an Irish classical scholar, born in Switzerland. He was educated in France and Germany and aftermanatty, John Fenuana (c. 1839), intacted goods written in Fall, and rean Irish classical scholar, born in cording the history of Ceylon from Switzerland. He was educated in its earliest period to the reign of Mahasena, who died in 302 A.D. Mahavilly-Gunga, the chief riv. in where he became professor of ancient the history. He has had many honours island, flows N. past Kandy, and

versities and learned societies. versides and learned socioles. An chief publications are a translation of Kuno Fischer's Commentary on Kant, 1866; Greek Social Life, 1874; Greek Antiquities, 1876, now a standard school-book; History of Standard School-book; History of Charles and 1880. The Schndard Greek Literature, 1880; The Greek World under Roman Sway, 1890; The Silver Age of the Greek World, 1906. He also deciphored and edited the 'Petrle Papyri' in the Cunningham Memoirs, 1891-1905.

Mabellet 1 (Formerly Age)

Mahallat: 1. (Formerly Anar) A prov. of Central Persia, between Kashan and Irak, and traversed by the Kum R. Pop. about 20,000. 2. Cap. of the above. Pop. about 9000.

Mahan, Alired Thayer (b. 1840), an American rear-admiral and author, born at New York. He served in the porn at New York. He served in the mavy for forty years, retiring in 1896, and was advanced to the rank of rear-admiral (retired) 1906. He is the author of several works, the most important of which are: The Gulf and Inland Waters, 1883; Influence of Sea Power upon the French Revolution and Empire, 1892; Life of Nelson. Is the source of the R. Krishna, of Sca Power upon the French Revolu-marked oy an ancient temple which is the resort of Hindu pilgrims. [1897; The Interest of the United States

marked oy an ancient temple which is the resort of Hindu pilgrims.

Mahabalipur (city of the Great Mahabalipur (city of America in International Control Mahabalipur (city of America in the Raipur dist.)

Mahabalipur (city of the Great Mahabalipur (city of America in International Warfare, 1908; The Horvest Within, 1909; and Internations, 1910.

Mahabalipur (city of the Great in Sea Power, 1897; The Problem of Mahabalipur (city of America in International Control Mahabalipur (city

Orissa to the Bay of Bengal, which it enters by numerous arms. It is connected with several canals and is used for Irrigation purposes. Its

length is 520 m. Mahanaim, was a tn. of some importance in Gilead, Palestine, its exact position being uncertain. According to most authorities It seems to have been near Jordan, and on the

horders of Gad.

Mahanoy City, a hor. of Schuylkill co., Pennsylvania, U.S.A., in a valley hounded on the S.E. by the Broad Mt., and produces anthracite coal. Pop. (1910) 15,936. Maharajah, see RAJAH.

Maharajnagar, or Charakhari, a tn. in Central India, is the capital of Charakharl state, Bundelkhand. Pop. 12,000.

Mahavansa, the title of two celehrated books written in Pali, and re-

Mahavira, was the twenty-fourth and last deified saint of the Jains, and his name significs 'great hero.' story is told in the Kalna-Sútra and the Mahavira-Charitra, two works held in great authority by the Jains. M. appears to have been a contem-

porary of Buddha.

Mahdi ('he who is guided aright,' from Arab hadd, he guided), the expected Messiah of the Mohammedans, supposed to have heen promised by Mohammed (though not mentioned in the Koran) to come and fill the world with righteousness, as the 'Imam' or calif of God. Abdulla, a Persian Shia of the 10th ecntury, much influenced by Zoroaster's doctrines, prophesied the coming of a future Moslem teacher, greater even than Mohammed, who should never than Monahmed, who should be forced M. to sign the peace of the sect of Ismaills, from whom arose Adrianople (1829). In order to support the sect of Ismaills, from whom arose Adrianople (1829). In order to support was all Mellemet

wars in different parts were the third Abbasid calif (775-c. 84), the descendants of 'Ali, one of whom disappeared mysteriously in 879, and the Don-golese Mohammed Ahmed (c. 1843-85) who attempted to conquer the E. Sudan. He made El-'Oheyd bis capital (1883), Khartoum was taken (1885), and Gordon killed. The empire was overthrown by Anglo-Egyptian forces, and Mobanined's successor crushed by the British ex-pedition to Dongola (1896), and hy Kitchener's victories at Athara and Ondurman (1898). See Darmesteter, The Mahdi, Past and Present, 1885; Wingate, Mahdiism and the Egyptian Soudan, 1891; Slatin Pasha, Fire and Sword in the Soudan (trans. 1896); Burleigh, Sirdah and Khalifa, 1898.

Mahé: 1. A tn. on the Malahar coast of India, 33 m. N.N.W. of Calieut, belonging to the French. Pop., with adjoining dist., 10,000. 2. The largest island of the Seychelles. in the Indian Ocean, 17 m. long and covered with high granite mountains. The chief town is Port Victoria. Area 56 sq. m.

Maheswar, a tn. in Indore State, Central India, stands on the N. bank of the Narbada R.; it is of great anti-

of the Narbada R.; It is of great anu-quity, and has many historical asso-ciations. Pop. 10.000.

Mahikantha, in India, a group of states forming a political agency under the government of Bombay. This territory is subject to a number of chiefs, of whom the Maharaja of Idar is the most important. Area

enters the Indian Ocean to the S. of Turkey, the son of Mustafa II., horn In 1696. He ascended the threne after the deposition of his uncle, Ahmed III., and continued the war against Nadir, Shah of Persia, but with little success, and mado peace He then entered upon a in 1736. war with Russia and lest Ockzakow in 1737. The Austrians, the allies of Russia, met with a serious defcat at

Krotzka, and peace was made at Belgrade in 1740. Mahmud II. (1808-39), Sultan of Turkey, the son of Ahd-ul-Hamid I., and the successor of his hrother, Mustafa IV., was horn in 1785. war with Russia was concluded four years after his accession by the treaty of Bucharest. In 1821 the War of Greek Independence hroke out, and Greek sailors of the Turkish navy mutinied. Afterthe hattle of Navarino Russia declared war (1827), and forced M. to sign the peace of

in N. Afr f Egypt, he secured a (909-33). in 1833, and ordered to be 'al-mabdi 'and waged religious the invasion of Syria in 1839, but died before the news of defeat reached

him. Mahmud of Ghazni (999-1030), powerful ruler of Afghanistan, and the first Eastern monarch to assume the title of Sultan. His father, Seluktagin, died in 997, and left lus throne to a younger sen, Ismail. Mahmud, who was governor of Nishapur, hastened to Ghazni, deposed his brother, and seized the throne. He repeatedly made inroads into India (1001, 1006, 1007, and 1009), and carried away much hooty. He alse subdued Ghur, Juristan, and Hc also Kharezin, and extended his kingdom as far as Samarkand on the N. and

Kurdistan on the W. Mahoba, a tn. in the Hamirpur dist., United Provinces, N. India. 87 m. S.S.W. of Cawnpur. 1t has interesting architectural antiquities. Pop. 10,500.

Mahogany, properly the fragrant, aromatic wood of Swietenia Mahogani a large Central American and Cuban tree. The heartwood is close-grained, hard, and durable, and takes a fine polish, and its production is a very important industry not only in its native territory, but also in India, where it has been successfully introduced and extensively planted. furniture appears to bo less popular than formerly. Substitutes for M. include the somewhat coarse wood of Persca indica of Madeira, the wood of Podocarpus telara, the M. or Totara pine of New Zealand, the wood of several species of eucalyptus, notably the blue gum (E. globulus) and E. resimifer. The Indian actual Section 1988. 11,000 sq. m. Pop. 360,000. the bluo gum (E. glebulus) and E. Mahmud I. (1730-54), Sultan of resinifera. The Indian redwood (Soymida febrifuga) is sometimes called the Ambrosian Library, Milan, and the Indian M. Khaya senegalensis is discovered many forgotten works, the African M., and the woods are chiefly from palimpsests. Pope Pius very similar.

Mahomedanism, see MOHAMMEDAN-

ISM. Mahomet, see Mohammed.

Mahon, see Port Mahon. Mahony, Francis Sylvester, known Father Prout (1804 - 66), a tbe of humorist, order cntcred Jesuits, but abandoned the priest-hood in 1832. He devoted himself to literature, and became a valued con-tributor to Fraser's Magazine. His best work, contributed originally to that periodical, is the Reliques of Father Prout, 1836.

Mahrattas, or Marathas, a term commonly applied to a mixed race, but mainly of Hindu origin, inhabit-ing Central India, chiefly in the states of Baroda, Indore, and Gwalior, but the word is now used to designate all Marathi-speaking Hindus in India. They are first mentioned in the 17th century as robbers and rebeis, who rose against the Mogul emperor at Delhl under tho leadorship of Sovaji, a Hindu adventurer, who proclaimed himself the chief. He was succeeded himself tho chief. He was succeeded by his son, Sambaji (1680), who en-deavoured to carry out his father's deavoured to carry out his lather is policy, but nine years later he fell into the hands of his enemy, Aurunzebe, who put him to death. For over a century they waged incessant war against the Mogul dynasty with varying success, but at length they sustained a heavy defoat at Paniput in 1761 at the hands of Ahmed Shahl Abdalli, the Amir of Afghanistan. Their power was eventually broken by the British in 1843. The M. are an active and bardy people, and devout worshippers of Brahma. Their language is akin to Gujarati and Sindhi, and their literature is abun-dant. Marathi speakers now number about 20,000,000. See also India-History.

Mährisch-Neustadt, a tn. of Moravia, 14 m. N.N.W. of Olmütz, has textile and browing industries, etc. Pop. 5003.

Mahurea, a genus of evergreen trees of the order Ternstræmiaceæ. The principal species is M. palustris of S. America; it bears terminal panieles of purple flowers in May. It is sometimes grown in the stovehouse.

Mahuwa, or Mahuwa, a tn. and port on the Kathiawar Peninsula, Bombay, India, 56 m. E.N.E. of Diu. Has a large export trade in cotton. Pop. 17,549.

Mai, Angelo, Cardinal (1782-1854),

VII. gave him the charge of the Vatican Library, which resulted in the publication of the famous Codex Valicanus.

Maia, in Greek mythology, the daughter of Atlas and Pleione, was the eldest of the Pleiades, and the most beautiful of the seven sisters. In a grotto on Mt. Cyllene M. became by Zeus the mother of Hermes. The Romans identified her with an old

Italian goddess of spring.

Maiano, Benedetto da (1444-98), a sculptor, born at Florence. Most of his works are to be found in churches, one of his best being the marble pulpit of Santa Croce. Ho also did some work as an architect, among his designs being that of a church porch. He also built a chapel for bimself near Prato.

Maiano, Giuliano di Nardo da, uncle of the preceding, was also a sculptor and architect. His works are to be found in Florence, Naples, and Rome. The date of his death is variously stated, but he is known to have been

alive in 1471.

Maida Vale, a residential suburb in the N.W. of London; adjoining Kil-burn, in the borough of Paddington. It has a station, Kilburn and Maida Vale, on the L. and N.W. Railway.

Maiden, an early form of gulllotine. An axe was fixed in a frame about 10 ft. high, so that it could movo up-wards in grooves. When the axc had reached the topmost groove, it was suddenly released and fell on the suddenly released and fell on the victim's neck. It was first used at the execution of the minor agents employed to murder Rizzio (1561). It was last used in 1710, since when it has been displayed in the Muscum of the Society of Antiquaries of Scotland, in Edinburgh.

Maidenhair Fern on Adjuntum

Maidenhair Fern, or Adiantum capillus veneris, a pretty British fern found in moist warm situations. It bears its fructification in short marting the market warm of the market warms. ginal patches on the edges of the subdivisions of the fronds, which are in turn to protect lt. It grows well in pots where frost is excluded. Maidenbair grass (Briza media) is more commonly called quaking grass. Maidenhair tree ls Salisburia adiantafolia.

Maidenhead, a municipal bor. in Berksbire, England, beautifully situ-ated on the r. b. of the Thames, 26 m. W. of London. The town is very old, and in 1399 was the secne of a contest

belo, Cardinal (1782-1854),

Richard II. Pop. (1911) 15,218.

Maidment, James (c. 1795-1879), as offered of the sorties of Henry IV. and Richard II. Pop. (1911) 15,218.

Maidment, James (c. 1795-1879), as offered of the Scottish bar in He was called to the Scottish bar in 1817, and became famous for his

lishments.

the same time, interested in anti-quarian research, and it was this inquarian research, and it was this interest which gave him his introduction to, and subsequent friendship with Sir Walter Scott. His numerous publications include: Reliquæ Scotlæ; Scotlish Ballads and Songs, 1859; A Book of Scotlish Pasquils, 1868.

Maids of Honour, of whom there are the time of the control of the song the strength of the song the strength of the song th

eight, are the immediate attendants upon the queen, under the direction of the mistress of the robes. They of are given the courtesy title 'Honourable,' and accompany Her

Majesty in turn, on all occasions.

Maidstone (A.-S. Meguaid- or Medwig-ston, i.e. the city of the Medway), the co. tn. of Kent, 43 m. S.E. of South-Eastern London bу and Chatham Railway. A municipal and parliamentary borough returning one member to parbament. Contains among numerous other public buildings a town-hall, County Lunatic Asylum, West Kent Infirmary, Asylum, West Kent Infirmary, County Ophthalmic Hospital, West Kent General Hospital, and a museum of local antiquities. There are also cavalry and militia barracks, many imposing churches, handsomo а Gothio fountain, while the river is spanned by a triple-arched stone bridgo. Noteworthy are the ruins of the Canterbury pilgrims' hostel, All Saints' College, founded in 1260 and suppressed by Edward VI. There are oil and paper mills, cement and lime works, in M. and around the town extensive hop gardens. Pop. (1911) 35,477.

Maidu, the name of a group of Indian tribes, formerly occupying the N.E. of California, U.S.A. A few are still found in this region, while some live near the Round Valley Reservation. They fed on acorns and roots, and lived in a kind of dugout of boards. Thoy went naked and executed a number of wild dances. Their chief occupation is basket-weaving. Consult Dixon, The Northern Maidu. American Museum of Natural History (vol. xvii.), 1905, and Powers, Tribes

of California, 1877. Maigre, or Meagre (Sciæna aquila), an edible fish rather like a bass with It ranges from very large otoliths. Britain to S. Australia.

Maiidæ, or Maians, sea spiders, with the first pair of feet much longer than the second pair (Macropodian). The carapace is much longer than its

Maikop, a tn. of Russia, situated in tho ter. of Kuban, Ciscaucasia, and is a rapidly growing commercial centre.

Pop. 34,191.

Maikov, Basil Ivanovitch (1725-78), a Russian author, born at Jaroslav, and died at Moscow. He gained a or a penalty of £20.

pleading in peerage cases. He was, at reputation, in spite of a neglected education, as a writer of satirio and humorous poetry. His best-known poems are Velisei, or Bacchus En-raged, an extravagant burlesquo in five cantos, which had a great vogue in Russia in spite of the fact that its wit and humour are to a great extent marred by 'raciness' and a generally marred by 'raciness' and a generally obscure style; and Igrok Lombera, or the L'Hombre Player, and The Most Shocking Fall of the Poets, each in three cantos, He also wrote two tragedles, Agrippa and Themistes, a number of tales and fables, and a few odes. A complete collection of his poems was muchical at St. Peters. poems was published at St. Petersburg in 1809.

Mail Armour was a fabric of meshes used as a defence against weapons; chain-mail was composed of interlinked rings of metal, and was introduced into the Roman army in imitation of the Gauls, and much worn under the later empiré, and also in the 12th and 13th centuries. It was very good for its purpose, a 'coat of mail' being marvellously hard to penetrate, but was very expensive to manufac-ture. Later the word mail was used for any kind of armour. See ARMS

AND ARMOUR.

Mail Coaches, sec COACHES. Maim. By the old law of England he that maimed any man, whereby he lost any part of his body, was sentenced to lose the like part of his own body. This relic of the lex lallonis (q.v.), for long survived in Sweden, but has now disappeared from the criminal codes of all civilised nations. At the common law (q.v.), it was only the loss of those limbs or members which might be useful to a man in fight that amounted to maining, or mayhem, as it was called. Biaokstone in his quaint old-world fashion, assigns as a reason for so specialising what is, after all, no more than a very ordinary form of injury, that a man's bmbs are the 'gift of the Wise Creator to cnable him to protect himself from external injuries in a stato of rom external injuries in a stato of nature. It is a felony under the Injuries to the Person Act, 1861, punishable by penal servitude to the extent of life, to wound, shoot at, or cause grievous bodily harm to a person with intent to M. him. To kill, M., or wound cattle is a felony punishable by penal servitude pot exceeding able by penal servitude not exceeding fourteen years. In connection with cattle-maining, the celebrated Eduli case will long be remembered for the brilliant vindication of a wrongly accused man through the efforts of Sir Arthur Conan Doyle. To M. or Sir Arthur Conan Doyle. wound any dog, bird, or beast, not being cattle, is punishable summarily with imprisonment up to six months,

Maimachin, a vil. of Mongolia, situ-| salem, and ultimately settled near ated on the Russian frontier, opposite | Cairo, and became physician to the

Chineso trade with Russia.

the sea. The town is large, but has no important industries, its only manufactures being textile. There aro products of wheat, barley, to-bacco, and dried fruits. The population is considerably mixed, the largest proportion being Uzbeg.

Maimand, a small tn. in the prov. of Fars, Persia, is famed for its manuf. of rose-water, which it exports in large quantities to Java, Arabia, and India. It is also noted for its almonds.

Pop. 5000.

Maimansingh, or Mymunsingh, a dist. of Bengal, British India, on the borders of Assam, and bounded on the W. by the Brahmaputra. The cap is Nasirabad. Arca 6287 sq. m.

Jesuits and studies are Jesuits and studies and studies are Jesuits and studies and studies are played as a preacher. Having published, in 1682, Trailé Historique de to the Rhine, into which the dofended the principles of the 220 m. The principal towns on Gallican Church, the popo caused him to be expelled from the order of Jesuits. He also wrote a History of the Pontificate of St. Gregory, and history of Calvinism, Arlanism, and state of the U.S.A. Owing to the beautiful climate and fine scenery, it contains more fashionable summer to the principal towns on the principal tow

Maimon, Salomon (1754-1800), a German philosopher, born of Jewish parentage near Mir, in Polish Lithuania. He was trained in the study of Talmud to become a rabbi, but went Taining to become a ration, out went best 1s., and Long 1s. M. was at to Berlin to study medicine, where he one time overrun by the Laurentian was attracted by the philosophy of Maimonides. In 1770 he published a numerable lakes affording excellent commentary on that philosopher's fishing. The northern slope is hilly, Morch Nebulin. He led the casual, the highest peak being Mt. Katahdin

Kiakhta, and is an entrepot of the sultan and superintendent of the The most valu-Jowish communions. Maimana, a dist, and to. in Afghan- able of the writings of M. are Morch istan, India, stands 2860 ft. above Nevochim, or 'Teacher of the Perplexed,' originally written in Arabic, translated into Hebrow by his disciple, Samuel Aben Tybbon, and into Latin by Justinian, Bishop of Nebio (Paris, 1520), and by the younger Buxtori (Basel, 1629), with a preface, which contains an account of the life of M., and Yad Hazakah, or 'The Strong Hand, which contains a complete digest of the Hebrew laws. It is written in remarkably good Hebrew. The best edition is that printed at Amsterdam (1702, 4 vols. fol.). M. founded a college at Alexandria for the instruction of his countrymen, in which he delivered lectures on philosophy and the Jewish laws.

the W. by the Brahmaputra. The cap, is Nasirabad. Arca 6287 sq. m.
Pop. 4,000,000.
Maimbourg, Louis (1610-86), a French scholar, entered the order of Jesuits and studied theology at Rome. On his return to France, he was employed as a preacher. Having published, in 1682, Trailé Historique de International PEglise de Rome, a work in which Mainz. It is navigable for the last he dofended the principles of the Gallican Church, the popo caused him to be expelled from the order of burg. Aschniferhuurg. Offenbach, and

resorts than any other state. The coast is much indented, and there are numerous islands including Mt. Desert Is., and Long Is. M. was at one time overrun by the Laurentian Morch Nebuhim. He led the casual, the highest peak being Mt. Katahdin cocentric life of a man of genius, de- (5200 ft.). The principal rivers are the rendere upon his friends for means of St. John and the Penobscot. Mose, and the penobscot st. John and deer abound, so that dcer abound, so that

hunting and shooting. part of the state is union, but in the valleys 1, and farming, especii poultry-farming, and

Kant, but he owes a large debt to market-galucing are carried on; hume. His Autobiography was published in 1792 (Eng. trans. by J. C. Murray, 1888). See Wolff, Maimoniana, 1813; Witte, S. Maimon, 1876.

Maimonides, or more properly canning of fish, and lumber are immonses Ben Maimon ('the light of portant industries. The principal canning of 1135-1201) one of the most manufacture are cotton and wellen goods. Israel') (1135-1204), one of the most manufs are cotton and woollen goods. paper and wood pulp, and boots and

colebrated of the Jewisb Rabbis, being a theologian, philosopher, and being a theologian, philosopher, and shoes. The chief manufacturing physician, was born at Cordova in towns are Portland (58,571), Lewiston Spain. Owing to the persecutions of (26,247), Bangor (24,803), Biddeford the Jews he removed to Fez in 1160, (17,079), and Auburn (15,064), the but he afterwards travelled in Jeru-first being the principal port; the

thirty-one members, and a House of Representatives of 151 members. It

ment during the 16th century, and since 1790 has been merged in the depts. of Sarthe and Mayenne, of which the eaps. are Le Mans and Laval. In 1855 the hishopries of Le Mans and Laval were separated. Until the end of the 9th century the history of M. can only be traced history of M. can only be traced through that of the bishops of Le Mans. The first hereditary count of M. was Roger (e. 892 - e. 898). In 110 M. formed part of Anjou, hut in 1154 it became an English possession under Henry Plantagenet. In 1204 it again passed into the hands of the Rogerian and in 1916 were diverted to French, and in 1246 was given to the Count of Provence. In 1328 it once more passed to the crown of France, but was given to Louis, the second son of King John II. in 1356. In 1425 it was taken by the English and lost again in 1448, returning permanently to the crown of France in 1481.

Maine, Sir Henry James Sumner (1822-88), an English jurist and legal historian, eldest son of James Maine, M.D., of Kelso, Roxburgh, born in India. Educated at Christ's Hospital and Pembroke College, Cambridge. In ivil 1847 lder iaw a 🕛

in Rc for ır in the I1 Left for India as legal mem-1850. her of the Indian Council, which post

Beeame a Temple in 18

nunctics, 1871; Early History of Inpeaks behind, and is surmounted stitutions, 1875; Early Law and with the family erest.

Maintenon, a tn. of France in the family erest. national Law, 1888. See Hutchin-son's Notable Middle Templars.

Maine-et-Loire, a dept. in France, formed out of the old prov. of Anjou, and named from its two principal rivers the Maine and the Loire; is bounded N. by the depts. of Mayenno and Sarthe, E. by Indre-et-Loire, S. and Sarone, E. By Inter-crimic, S. by the depts. of Vienne, Deux-Sèvres, and Vondée, and W. by Loire-Inferieure. Arca 2812 sq. m. Pop. 513,000. The department presents a pleasing variety of low hills, mostly (1639) with his wife and daughter to planted with vines, and of plains, which are very fertile. The department belongs entirely to the basin of turned to France, and her mother the Loiro, which river crosses it from

capital is Augusta (13,211). The state E. to W., and forms in its course is governed by a senate composed of several beautiful islands. The northern districts are drained by tho Mayenne and its feeder the Oudon, by the Sarthe and its feeder the Leir, and by the Authion. The Mayenne and the Sarthe unite above Angers, and form the Maine, which after a course of about 5 m. falls into the Loire S. by W. of Angers. Mainotes, The, are sometimes re-

garded as descendants of the ancient Spartans, whose land they now occupy, but more probably they are of Slavonic origin. They number They number 60,000. Formerly independent, they fought for the liherty of Greece, but after the death of Mavromikalis their

independence was destroyed. Maintenance, in criminal law, means the officious intermeddling in a lawthe officious intermedding in a law-suit that in no way concerns one, by maintaining or assisting either party with money or other material aid, to prosecute or defend it. Champerty (q.v.) is a species of M. M. is a misdemeanour punishable by fine and imprisonment. Prosecutions are never heart of coving to the great default. heard of, owing to the great difficulty of proving a manifestly improper motive in any particular caso. It is not M. to help a poor litigant out of charity, and as assistance, pecuniary or otherwise, is always justifiable where one has an interest in the subject-matter in dispute, as that of a remainderman (q.v.), or a superior landlord, though not actually a party to the action. Apparently it is never M. to assist another in a criminal prosecution or defence.

Maintenance, Cap of, in heraldry, a cap of crimson velvet turned up with ermine which is carried before a her of the initial Country, in the horizontal for seven British sovereign at his coronation, years. Appointed in 1873 Corpus opening of parliament, or other state by the hereditary hearer,

, by the hereditary bearer, quess of Winehester. A simi-M., also called 'cap of dig-

dept. of Eure-et-Loir. It contains a castle and the ruins of the huge aqueduct begun by Lonis XIV. to convey water to Versailles.

Maintenon, Françoise d'Aubigné, Maquise de (1635-1719), the daughter

of Constant d'Aubigné and of Jeanne do Cardillae, and granddaughter of Theodore Agrippa d'Aubigne. Francoiso was born in the prison of Niort, where her father was then imprisoned. On obtaining his release, he went (1639) with his wife and daughter to

her in a convent, where, at the age; of fourteen, she was reluctantly con-verted to Roman Catholicism. When near the two sons whom Madame de Montespan had borne to Louis XIV., and now becoming acquainted with the Cornelius Schosten. They sailed past the Straits of Magellan, through a cised an extraordinary ascendoncy to Straits of Magellan, through a cised an extraordinary ascendoncy to Straits of Magellan, through a cised an extraordinary ascendoncy to Straits of Magellan, through a cised an extraordinary ascendoncy strait between Staaten Land and over him. In 1684, after the death Tierra del Fuego, which they named her, and she had much influence in the selection of ministers and generals. When he died in 1715, she retired to the former Abbey of St. Cyr, and here she died. See Life by Cyr, and here she died. See Life by Count d'Haussonville. Count d'Haussonville.

Mainz, or Mayence, an ancient city and fortress of the German empire, in the grand-duchy of Hesse, 20 m. W.S.W. of Frankfort. It is situated on the l. b. of the Rhine, just below the infux of the Main, and is connected with Kastel on the opposite side by a fine modern bridge. In the centre of the town stands the cathedral, which dates from the 13th century. Other notable buildings are the old electoral

int public Romano. ad church There is

furniture, pianos, machinery, leather goods, soap, etc., are manufactured. M. (ancient Maguntiacum), was founded in 13 B.C. by Drusus, and there are several interesting Roman remains. a centre of book printing. formally ceded to France by the treaty of Luneville (1801). It was restored to Germany by the treaty of Paris (1814), and was assigned to compelled him to flee to Venice. Hesse - Darmstadt in 1816. Pop. Later, the King of Sardinia sent him as minister plenipotentiary to St. captured by the French in 1797, and

Maire, Jacques le (c. 1590-1616), a mont. verted to Roman Catholicism. When she was sixteen she became acquainted with the poet Scarron, Company had obtained a declaration of the refined and in the midst of the refined and in the longing to the company was tellectual society which frequented food Hope, certain private merchants 1660, and four years afterwards she determined to discover a new route was intrusted with the education of the two sons whom Madame de Montespan had borne to Louis XIV. and missioner, under the command of ehant,

> crenata bears largo lilac flowers in April; the yellow flowers of M. taxifolia appear in July. If grown in the open, these plants need protection in

the winter.

the winter.
Maison Carrée, a vil. of Algeria,
7 m. S.E. of Algiers, on the r. b. of
the Harrash. Pop. 7300.
Maisons-Alfort, a tn. in the dept. of
Seinc, France, on the Marne, 3 m.
S.E. of Paris. It has a veterinary
school (founded 1766). Pop. 13,500.
Maisons Laffitte, a tn. in the dept.
Seinest-Oise, France. on the l. b.

of Seine-et-Oise, France, on the 1. b. of the Seine, 10 m. N. of Versailles. Pop. 8000.

Maistre, Joseph Marie, Comte de (1754-1821), a French publicist and philosopher, born at Chambery, son of Comte François-Xavier de M., president of the Senate of Savoy. In 1792, on the approach of the senate of savoy. several interesting Roman remains. In 1792, on the approach of the After the fall of the Roman empire, republican armies, he fled with his the fort suffered from attacks by Vandals and Huns, but regained its prince, the King of Sardinia, but a year later he returned to Chambéry. Strength by the 13th century, when it was the head of a confederacy of Rhenish cities. Gutenberg, the inventor of movable type for printing, Compatriotes and Adverse de quelques made it famous in the 15th century as Parents des Militaires Savoisiens à la scentre of hook printing. It was presented in 1796 ha made It was Nation Française. In 1796 he made

as minister plenipotentiary to St. Maiorescu, Titu (b. 1840), a RouMaiorescu, Titu (b. 1840), a RouPetersburg. Here he published a number of works, notably Du Pape and Examendela Philosophiede Bacon. An inveterate and prejudiced enomy publio Instruction (1874-76, 1888-89) for revolutionary ideas, he scourged without mercy or discrimation the and Minister of Justice (1900-1). His works include Poesia rumana, 1867; century. See J. Mandoul's Un Homme Observart polemice, 1869; and Logica (2nd cd), 1886.

above, was born at Chambery. He served in the Piedmontese army, but on the annexation of Savoy by tho French soldiers he took a com-mission in the Russian army, in which he rose to the rank of general. He served in the Austro-Russian eam-paign and fought in the Caucasus. Finally he settled in St. Petersburg, Finally lie settled in St. Peuersburg, where he died. He wrote a very pleasant fantasy ealled Voyage autour de ma Chambre in 1794. His subsequent works include: Le Lépreux de la Cité d'Aoste, 1811; Les Prisonniers du Caucase, 1815: La jeune Sibérienne, 1815; and L'Expédition Nocturne, 1825. See Sainte-Beuve's Portraits Kavier de Maistre, 1865.

Maitland, Sir Frederick Lewis (1777-

1839), a rear-admiral, born at Ran-keillour in Fifeshire, the third son of Frederick Lewis M. After serving some time in the Martin sloop with Captain George Duff, and with the Hon. Robert Forbes in the Southampton frigate, in which he was present at the battle of June 1, 1794, M. was promoted to be lieutenant of the Andromeda, April 3, 1795. He was shortly afterwards moved into the Venerable flagship of Admirable Dun-Venerable hagship of Admirable Dun-ean in the North Sea, and in April 1797, went out to the Mediterranean to join Lord St. Vincent, by whom ho was appointed to the Kingfisher sloop. In Deo. 1798 the Kingfisher was wreeked, M., who was in tem-porary command, was tried by courtporary command, was tried by court-martlal and honourably acquitted. Immediately afterwards he was appointed flag-lieutenant to Lord St. Vincent. From 1827-30 he commanded the Wellesley in the Mediteranean. He attained his flag July 22, 1830. He had already been nominated a C.B. on the reconstruction of the order in 1815, and on Nov. 17, 1830, he was advanced to be a K.C.B.

Maitland. Sir Richard (1496-1586).

Maitland, Sir Richard (1496-1586), of Lethington, son of William M. of Lethington and Thirlstane, who fell at Flodden, and of Martba, daughter of George, Lord Seaton, studied at St. Andrews and in France, and on his return to Scotland was successively employed by James V., the Regent Arran, and Mary of Lorraine. About 1551-52 he received the honour of knighthood, became a lord of the Court of Session in 1561 (before which, however, he had the misfor-tune to lose his sight), and Lord Privy

French soldier and writer, brother of order. He merits consideration not only as no eminent and unright lawyer, but as a poct, a poctical antiquary, and an historian. own verses were written after his sixtleth year, and show what things he had most deeply at heart. For the most part, they consist of lamentations for the distracted state of his nativo country, the feuds of the nobles, the discontents of the common people, complaints 'aganis the lang proces in the courts of justice,' and the depredations 'of the border A complete edition of M.'s robbers. original poems was first published in 1830 (ono 4to vol.) by the Maitland Club, a society of literary antiquaries, taking its name from Sir Richard. His collection of early Scottish poetry was a work undertaken, if not completed, before his blindness attacked him. It consists of two MS. volumes, now in the Pepysian Library, Magdalene College, Oxford. M.'s principal historical performance is the Historic and Cronicle of the Hous and Surename of Seytoun, etc.

Maittaire, Michael (1688-1747), a classical scholar, born in France, of classical scholar, born in France, of Protestant parents. At the revocation of the Edict of Nantes, his family settled in London, and Michael was sent to Westminster School. He took his M.A. at Oxford in 1696, and returned to Westminster as second master (1695-99). Ho edited many classical works with indices, and wrote: De Graca Lingua Dialectis, 1706; Annales Typographici ah artis inventæ origine ad annum 1557, 1719-41; and Marmora Oxoniensa, 1732.

Maiwand, in Afghanistan, situated 35 m. N.W. of Kandahar, and was the scene of a British defeat by Ayub Kban, July 27, 1880.

Maixent (or Maxence), St. (c. 447-515), Abbot of Salnt-Saturnin, borr at Agde. He entered the monastery of Saint-Saturnin in Poitou and became abbot there about 500. In 507 ho received the visit of King Clevis who came to request his prayers or behalf of an expedition against the Visigoths. His day is June 26.

Maize, or Indian Corn (Zea mays) a cereal grass with broad leaves and stout succulent stems. When ripe the valuable seeds are arranged in compact rows on a rachis; they are whito, yellow, red, or purple in colour, very firm and flattened at the apex. The crop is of great economic importance in the warmer parts of America, Seal in 1562. M. was one of the best Southern Europe, India, and Ausmen of his time. In an age of violence, fanaticism, and perfidy, he in gardens for its ornamental effect was honourably consplcuous by his moderation, integrity, and anxiety for the establishment of law and sweet or sugar corn. It is also grown formented in S. America to produce of routine and discipline.

M. heer.

Majesty (Fr. majesté, Lat. majestas, grandeur, greatness, from the base mag, as in magnus, great, major, greater, etc.), dignity, greatness, a term used especially to express the dignity and power of a sovereign. This application is to he traced to the use of majestas in Latin, to express use of majestas in latin, to express plants that the supreme sovereign dignity of the the military exercises of the soldiers Roman state, the majestas

or populi Romani, hence lædere or minuere, was high treason, crimen Mommsen conjectures tha

of crimen majestatis or less-majeste in carrier times related exclusively to plied to tand only later extended to violations of popular rights generally major. of popular rights generally. There is, however, little evidence in support popular rights generally. of this conjecture. In its more precise use, crimen majestatis was distinguished from perduellio, which connoted essentially acts hostile to the state, as treason and desertion, whereas crimen majestatis meant rather some act involving an attack on the respect due to the dignity or sovereignty whether of the people or their representative the king. Later Later usage, however, made no distinction hetween lese majesté and perduellio, except to assign a much lighter punishment to the former. The term majesty was strictly confined in the cler middle ages to successors of the Roman emperors in the West. Later, the word is used of kings also. In In England the use is genera to the reign of Henry fullest form in English Most Gracious Majesty.'

Majolica, a name properly applied to a species of Italian ware in which the body is coated with a tin enamel, on which is laid and fired a painted decoration. It is also applied to similar wares made in imitation of the Italian ware in other countries. word in Italian is Maiolica. usually been supposed that this ware first came from the island of Majorea. but it is more likely that the uame was given by the Italians to the lustred Spanish ware imported by ships hail-

ing from the Balearie Isles.

Major, in the army, the lowest rank
of field officer. Each infantry battalion has two, and each cavalry and the Marines about 60, 150, divided between the infantry and artillery divisions. In the field Ms. are always mounted, and usually and l are always mounted, and usually Palma (q.v.), the capital.

command the attack and the reserve.

On home duties the M. is one of the person becomes sui juris, i.e. legally

as a fodder erop. The ripe seeds are; the commanding officer in all matters Whilst in garrison they serve in turn as field officer for the day, and when the oceasion rises as presidents of the Their pay district courts-martial. varies from 16s, in the infantry of the line regiments to £1 4s, in the household cavalry. A sergeant-major of a regiment is a non-commissioned officer who in general superintends 1 music, greater.

sts of four semitones, a of three. A M. tone is the

an histor

ants,

in th

N. Bern. and Paris, was the teacher of John Knox and George Buchanan. In 1506 he was a doctor of the Sorbonne, and in 1519 became professor of divinity at St. Andrews. He wrote in Latin treatises on divinity and morals, and a History of Greater Britain, in which the separate histories of England and Scotland (Historia De Gestis Scotorum) were brought together, published at Paris (1521). In his writings, while upholding the doctrinal teaching of Rome, he was outspoken in condemning the corruptions of

's Dialectics. 2a (Sp. Mallorca), the largest of the Balcaric Isles (q.v.), lies 107 m. S.E. of the mouth of the Ehro, the nearest point of the Spanish coast, and 171 m. N. of Algiers. Its greatest length (from E. to W.) is 64 m., and its breadth (from N. to S.) 48 m., with an area of 1310 sq. m. The N.E. half of the island is mountainous; tho other parts are finely diversified with hills, valleys, and plains. The climate is healthful, the sea-breeze preserving a nearly equable temperature over the whole island. The inhabit-

numt and industrious, and mostly employ themselves in agriculture. The chief regiment three, on its strength. The products of the island are marble, Engineer Corps has altogether about slate, plaster, the common cereals and legumes, oranges, silk, lemons, oil, wine of excellent quality, olives, and aromatic herbs. The chief town is

most important officers. He assists old enough to manage his own affairs.

M. at twenty-one (see INFANCY). possess fire-arms, the 2. Rule by M., or the decision of any issue by the votes of the M. is the working principle of the democratio idea of representation. It has up to now been generally considered to be the only practicable method of party government, but the advocates of proportional representation and representation of minorities are gaining increased support the more it is reallsed both that the mero voice of the M. is not necessarily right, and that whether it be so or not on particular issues, the views of minorities may none the less he entitled to respectful consideration. On the constitutional convention whereby no cabinet in England cau either take office or retain it without a 'working ' i.e. a more or less substantial M., see under CABINET. 3. To join the great M., i.e. to die. A classic cuphemism, the first English adaptation of which is attributed to Young's lines:

'Life is the desert, life the solitude: Death joins us to the great majority.

Majuba Hili, in Natal (properly Amajuba, Zulu for 'hill of doves'), a mountain in Northern Natal, part of the Drakensberg range, rising about producing corn and wine, and afford7000 ft. above the sea, and over 2000 ft. above the level of the surrounding country. It overlooks the river fishing. A considerable trado is pass through the Drakensberg known as Laing's Nek, and is 8 m. S. of the vicinity. Pop. 34,000.

Transverse border and 18 m. N. of the McC. Paul (1722.02). C. Hyperstep. Transvaal border and 18 m. N. of the town of Newcastle. The railway from Durban to Johannesburg skirts the base of the mountain. The Boers defeated the British here in 1881, General Colley being killed.

Majunga, Madganga, or Mojanga, in Madagascar, on the N.W. coast. just N. of 16° S., and Diego Suarez, is an important pert for foreign trade.

Pop. 7000.

Makalla, or Mokalla, a port of Arabia, 300 m. N.E. of Aden, the principal port of Hadramaut. Pop.

18,000 Makalla, Baggara Arabs of Semitic origin, so called because they are great cattle owners and breeders. They occupy the country W. of the White Nile, between the Shillnk White Nife, between the Shillnk territory and Dar Nuba, being found principally in Kordofan. They are true nomad Arabs, having intermarried little with the Nuba and having preserved most of their national The date of their characteristics. arrival in the Sudan is uncertain;

By English law an infant attains his carry no shield, and though many customary weapons are lance and sword.

Makari Kari, a salt lake of Bcchuanaland, S. Africa. Length 170 m.; breadth 100 m.

Makart, Hans (1840-84), an Austrian painter, born at Salzburg, son of au inspector of the imperial castle. Aptly called the first German painter of the 19th century. When he, as a youth, entered the Vienna Academy, German art was under the rule of Cornelius's celd classicism. It was entirely intellectual and academic, and it is not surprising that M., poor draughtsman to the last, with a passionate and sensual love of colour, was found to be devoid of all talent. He went to Munich, and there attracting Piloty with bis 'Cupids' and 'Plague in Florence,' his fame became firmly established. He used such bad pigments that the majority of his large paintings have perished.

Make, a tn. of Hungary, cap, of the co. of Csanád, 135 m. S.E. of Budapest. The most noteworthy huilding is the palace of the Bishop of Csanad. whose usual residence is in Temesvar. The town possesses numerous milis, and the surrounding country is fertile,

vicinity. Pop. 34,000. Mako, Paul (1723-93), a Hungarian savant and mathematician, horn at He taught philosophy and classics at different Jesuitical colleges. Afterwards he hecame director of the faculty of philosophy at the Hun-garian University. His works include dissertations on lightning and lightning conductors, Carminum ele-giacorum, and treatises on logic, and the differential metaphysics, calculus.

Makran, a dist. in the S.E. of Persia and S.W. of Baluchistan, bounded S. by the Arabian Sea. It is noted for its fruit. Area 26,000 sq. m. Pop. 78,000.

Makrizi Taki Addin Abu Ahmed

Mohammad (1360-1442), an eminent Arabic historian and geographer, born in Makriz, near Baalbee. He early devoted himself to the study of history, jurisprudence, tradition, astrology, etc., at Cairo, where also he afterwards held the offices of Molitasib or inspector of weights and they appear to have drifted up the measures, of khatib and iman at Nile valley and to have dispossessed different mosques. M. wrote a history the original Nuba population. A of the Mamluk sultans, two treatises purely pastoral people, they move from pasture to pasture, as food becomes deficient. The true tribesmen and translated by Tyohsen (into French-Arabic chrestomathy, q.o.), of Malachi with Ezra and Nehemiah but his most important work is his shows much similarity of subjectDescription of Equpt, which gives an matter, especially in the strong conaccount of the history of the country domnations of intermarriage with the from its conquest by the Mohamleather and the people's laxity in the medans, as well as a description of its natural history and antiquities and of the manners and customs of the inhabitants. He commenced writing On the Important Personages who had Visited Egypt, and intended to fill eighty volumes, but only a small portion of these (one autograph volume is in the Imperial Library at Paris) was really accomplished. He portion Paris) was really accomplished. died in Cairo.

Malabar, a maritime dist. of British India in the presidency of Madras, is bounded on the E. by the dist. of Coimbatore, while on the W. its shores are washed by the Arabian snoves are wasned by the Aranian Sea, and it extends in lat, from 10° 15′ to 12° 18′ N. Area 5800 sq. m. Pop. (estimated) 3,000,000. The surface it occupied in the E. by the Neilgherries, and the Western Ghats cover a great portion of the district. The name of this district is applied to the whole South-western coast of Southers south-westorn coast Sonthern of India. Calicut is the capital.

Malabon, a dist. of the Philippines

on the Isle of Luzon.

Malabuyoc, a dist. of Cebu Is.,

Philippines.

Malacca, a tn. on the W. coast of the Malay Peninsula, which, with the territory lying around and behind forms one of the Straits Settlements, and gives its name to the strait which divides Sumatra from the Malay Peninsula. Its name, which is Mělaka, is that of a species of Jungle fruit, and is also borne by the small river on the right bank of which the old Dutch town stands. The Dutch town is connected by a bridge with the husiness quarter on the left hank, which is inhabited exolusively by Chinese, Eurasians, and Malays. M., now a somnolent town, a favourite resort of rich Chinese who have retired from business, is visited by few ships, and is the least important of the three British settlements on the straits which give their name to the colony. Since 1511 it has continued to be the possession of one or other of the European powers. Area of colony 660 sq. m. Pop. 96,000.

Malachi, the last of the minor prophets, about whose person nothing is known. His personal existence seems doubtful, for the Septuagint has in i. 1, 'by the hand of his messenger'; of the Targum has 'by the hand of Clairvaux in the arms of St. Bernard. Malachi (or, of my messenger), whose name is Ezra the scribe.' The propagate of the Latin by St. Bernard and translated phecy belongs to the age of Ezra and into Italian by Maffei. See Harris' Nehemiah, the period during which dition of Ware's Bishops.

Malacology (from Gk, makasé, soft, Malacology)

Latin) and by Silvestre de Sacy (into the temple. A comparison of the Book heathen and the people's laxity in the payment of the priestly dues. M. further attacks the degeneracy of the priesthood.

Malachite, a mineral consisting of sio cupric carbonate, CuCO₃Cu basio (HO)2. It has a finc green colour; it generally occurs massive. with mamiliated, remiform, or hotryoidal surface. It is occasionally found as dark green monoclinic crystals, and when associated with limonite as compaot fibrous or earthy masses. It is found in great quantity in Siberia and the finer quality is used for making ornaments, mosaie, etc., as it takes a fair polish. It also occurs with other copper ores in Russia, Australia, Arizona, etc., and is smelted with other minerals.

Malachite Green, a brilliant green dye derived from coal-tar. It is a double salf

οť zinc

triphcnyl .

and wool without any previous preparation of the material, but cotton requires to be mordanted with tannin

and tartar emetic.

Malachy, St., or Malachy O'Morgair (1094-1148), an illustrious Irish prelate, born at Armagh, of a noble family. Early put himself under the tutelage of a pious recluse named Imao, and his ascetic oxample being followed by othor young men a monastery grew up round the cell of Imae. Ordained priest at the age of twenty five, he preached among the poor. Having sought out Malchi, Bishop of Lis-more, he learnt from him the rule of ancient ceelesiastical discipline, and on his return was placed at the head of the Bangor abbacy. Thence he took the episcopal see of Connor, but on the ruin of this town by the King of Ulster he returned to Armagh, of which he was elected archbishop in 1127. Ho endeavoured to revive ancient disciplino in this diocese, and cleft discipling in this directs, and provided the parishes with pastors. In 1135, having got Gelax accepted as his successor, he returned to Connor, installed a bishop there, and himself went to live in Down, where ho founded a new opiseopal see. In

was written after the rehuilding of hoyos, discourse), the science which is

brntes and particularly molluses.

Malacopterygii, Cuvier's name for an order of fishes in which the rnys of the fins are soft and cartilaginous and not pointed at the extremitics.

Malacostraca, that division of the Crustacea which includes the higher forms, such as crabs, lobsters, shrimps,

woodlice, and sand-hoppers.

Maladetta, the name of a group of mountains in the Central Pyrenees. situated on the borders of Franco and It contains the culminating peak of the entire range, the Pic de Nethou, or Pico de Aneto, sometimes called the M., which has an elevation

of 11,165 ft. Malaga, n scaport of Spain, and cap. of n prov. of the same name, on a bay of the Mediterranean, 65 m. N.E. of Gibraltar. The town is enclosed by mountains and communded by a fine old Moorish eastle, called the Gibralfaro, built in the 13th century on the site of a former Phænielan stronghold. Other important huildings are the cathedral, with a spire 280 ft. high, the episcopal palace, nn opera house, and a bull-ring. The climate of M. ls noted for its uniform and constant sunshine, mildness which make the place a favourite resort for invalids. The harbour, which is formed by several moles, is capable of holding hundreds of ships, and may he ontered during any wind.
M. is a very important commercial centre, and exports wine, ollves, figs, raisins, lemons, etc. The manufs. include textiles, rope, leather, etc., and there are clgar factories, sugar mills, and iron foundries. Pop. 133,045.

Malaga Wine is produced chiefly from the Axarquia dist. of Malaga, and the finest is made from the muscatel grapes, Dulce and Lagrimas being the best-known vintages.

Malakoff: 1. Atn. ln France, dept. of Seine, a S.W. suburb of Paris. of Senie, a S.W. suburb of Patis. Originally it was called California, but was renamed as above in 1848. Pop. about 16,600. 2. A defence of Sebastopol, Crimea, noted for its storming by the French in Sept. 1855.

Malalas, Johannes, a Byzantine ehronicler of the 6th century, was probably of Syrian origin, but little is known of his life. He wrote a universal history, from the creation to the reign of Justinian, which was edited by Humphrey Hody, Oxford, 1601 1691.

Malalbergo, a com. of Emilla, Italy, 15 m. N.N.E. of Bologna. Pop. about

5500.

Malapterurus, a genus οf fish typified by M. electricus, the electric catfish, found in the fresh water of tropical Africa. The electric organ is

concerned with soft-bodied inverte-1the abdomen hut extends over the whole body.

Mälar, Lake, in Sweden, extends inland from the Bultic for 81 m. and varies In breadth from 2 to 23 m.; the R. Arboga enters its W. cnd and serves to connect it with Lake Hjelmar. Stockholm is situated on the strait connecting Lake M. with the Baltic.

Malaria (from It. mala, bad, and aria, air), a diseased condition common In tropical and marshy districts, and associated with parasites of certain gnats and mosquitoes. The names marsh-fever, jungle-fover, ague, etc., are applied to forms of the disease, and the names remittent, intermittent, tertian, quartan fever, etc., to forms characterised by particular kinds of periodicity. The paroxysms comprise cold, bot, and sweating stages, which recur in that order. The first stage is marked by shlvering and a feeling of chill on the part of the patient, although the body temperature is much higher than normal. The cold feeling is due to the constriction of the surface blood-vessels; the interior vessels become correspondingly gorged, and there is considerable enlargement of the spleen and an in-creased flow of urine. The second stago commences with a feeling of heat internally which gradually proceeds to the surface, glving the usual feverish sensations of excessive heat, increased thirst, dry skin, and mental confusion or delirium. The body tem-perature is still high, but not so high as in the 'cold' stage, the enlargemont of the spleen continues, but tho flow of urine becomes scanty. with third stage commences amelloration of the dry condition of the skin, proceeding to profuse per-spiration. The body temperature falls, the patient feels considerably exhausted but easier, and may drop into a deep sleep. If there is an interval of normal conditions between the paroxysms, the fever is known as intermittent; if the symptoms are merely ameliorated for a time, the fever is called remittent. If the paroxysms recur daily, the fever is designated quotidian; if on alternate days, tertian; if two days elapso between phroxysms, quartan. If two paroxysms occur in a day, the fever is called double quotidian. The quoticalled double quotidian. dian form usually occurs in the morning, the tertian at noon, and the quartan in the ofternoon. The cause of M. Is the presence of specific protozoa in the blood. It is now sufficlently well established that these protozoa are parasitie on the mosquito, and that human beings are intected from the bite of a mosquito. tropical Africa. The electric organ is When they are established in the of cutaneous origin and is thickest on blood, they muitiply by throwing off

sporcs and at the same time liberato a toxin which causes the feverish symptoms. The manner in which the cycle of reproduction and growth is carried on accounts for the periodicity of the malarial paroxysms, the tertian, quartan, etc., forms being due to parasites from different species of mosquito. The process of reproduc-tion may reenr again and again as long as the patient lives, the protozoa acting upon the blood and turning the hemoglohin iuto melanin. The parasites, however, have another phase of existence which they pass in the body of the mosquito, the process of reproduction being in this The mosquite thus serves as an intermediate host to earry infection from one patient to another. The prevention of M. is, therefore, concerned with the extinction of the mosquito. Mosquito nets are useful as a means of defence if tho meshes be sufficiently fine, but permanently healthy conditions can only be established by preventing the reproduction of the kinds of mosquite or gnat responsible for the infection. These mosquitoes belong to the genus Anopheles, different species of which thrive in different countries. The life history of the mosquito comprises stages as ovum, larva, nympha, and insect. The ova arc deposited on the surface of still or slowly moving water, the larva also floats about on the water, and the complete insect deposition of the ova. The partial in stature, the interest or complete extinction of the insect the most part below the middle height, may therefore be effected by while the Polynesians generally extended the polynesians generally extended the polynesians of the polynesians generally extended the polynesians generally extended the polynesians generally extended the polynesians of the partial in stature, the interest the most partial in stature, the interest the most partial in stature, the interest the partial in stature, the interest the most part below the middle height, and the partial in stature, the interest the most part below the middle height, and the partial in stature, the interest the most part below the middle height, and the partial in stature, the interest the most part below the middle height, and the partial interest the most part below the middle height, and the partial interest the most part below the middle height. thoroughly draining of waters which tend to nant. Even if the insec

example, Anotheles maculipennis, or the speckled-wing mosquitto, still dourishes in England with no consequences as to M., although it is still associated with the disease in other parts of Europe and in America. The only effective treatment for M. once contracted is the administration of contracted is the administration of quinine, which destroys the parasite. The doses should he from 10 to 30 supposed to be the aborigines of the phate is most commonly employed, classes of Maleys, says Crawfurd, and may be given in solution by the contracted in the contracted is the sulphate is most commonly employed, classes of Maleys, says Crawfurd, and may be given in solution by the contracted in the contracted is the sulphate is most commonly employed, classes of Maleys, says Crawfurd, and may be given in solution by the contracted in the Portuguese first mouth, reetum,

As a prophylactic 2 to 4 grains are tal

by dwellers in malarial regions.

Malatia, a tn. of Asiatio Turkey, in the vilayet of Manurct-ul-Aziz, 100 m. N.E. of Marash, near the Euphrates, It is an important trading centre, and is noted for its orchards and vincyards. About one-fifth of the population are Armenians and the rest Turks; in 1895 M. was the seene of a terrible massacre of Chris-

seem of a terrible massacre of Christians. Pop. 30,000.

Malay Apple, the globular fruit of Eugenia malaccensis. It is fragrant and edible, and like the fruit of other species of Eugenia, called rose apples, is made into preserves. It is often grown in greenhouses.

Malay Archipelago, seeINDIES.

Malays (properly Malayus, a Malay word, the derivation of which has not yet been satisfactorily ascertained) is the name given, in a restricted sense, to the inhabitants of the Malay Peninsula, but in its wider acceptation to a great branch of the human family, dwelling not only in the hut in peninsula mentioned islands, large and small, of the Indian Archipelago, in Madagascar, and in the numerous islands of the Pacific. In physical appearance, the M. are a brown-complexioned race, rather darker than the Chinese, but not so swarthy as the Hindus. They have iong, black, shining, but coarso hair, little or no beard, a large mouth, oyes large and dark, nose generally short and flat, lips rather thicker than those the water, and the complete the water, and cheek boutes made developed within thirty days of the of Europeans, and cheek boutes made deposition of the ova. The partial In stature, the Indo-Malays are for the most part below the middle height,

formed limbs, and are small about the wrists pressed for a time, the cycle of exist- and ankles. Such is the general ence of the parasite may be broken appearance of the M. proper, or in- and the mosquito itself is thus ren- habitants of the peninsula and Indian example, Anopheles maculipennis, or divisions. There are the criticisus the speekled-wing maculipennis, or divisions. There are the criticisus the speekled-wing maculipens.

o, when the Portuguese first in the waters of the Archi-just as they do at the present day. That people describes them as when the Portuguese first by dwellers in malarial regions.

Malaspina Glacier, Alaska, N. having existed also for two centaries, is one of the largest glaciers, in the northern regions; it lies W. of Pakutal Bay and is fed by the snows of St. Elias range. essentially the same lauguage. The habitants of these states depend M. are essentially islanders, and have largely for their prosperity upon agiimuch of the daring and enterprise culture. Area 2600 sq. m. Pep. for which nations familar with the sea are famous. Their original seat is by themselves stated to have the island of

the peninsula f Borneo claim to have had a Menangkabo origin. Palembang, however, also in Sumatra has been mentioned as the original seat of Malay civilisation; and others, again, point to Java as the source from which both Mcnangkabo and Palembang received their first settlers. 'The Javanese,' says Crawfurd, 'would seem to have been even the founders of Malacca. Monuments, which prove the presence of this people in the country of the Malays, have even been discovered. The Malay languago is simplo and easy in its construction, harmonious in its pronunciation, and easily acquired by Europeans. It is the lingua franca of the Eastern Archipelago. Of its numcrous dialects, the Javaneso is the most reflued, a superiority which it owes to the influence upon it of Sanscrit literature. Many Arabic words have also been incorporated with it, by means of which the Javanese are able to supply the deficiency of scientific terms in their own tongue. In religion, the civilised M. are Mohammedans, having embraced that faith in the 13th or 14th century. The tribes in the interlor and the men of the sea' have either no religion at all, or such as can be regarded only in the light of most de-based superstition. The moral character of the Indo-Malays generally does not stand high; they are passionatc. treacherous, and rovengcful. Although good sailors and able to amass wealth by legitimate comamass wealth by legitimate commerce, they prefor piracy, and numerous have been the victims among European traders to Malay treachery and daring. Indeed, so little faith have Europeans in their professions or engagements, that they will never engage more than two or three of they in a chin's court for fear of these in a chin's court for fear of them in a ship's crew, for fear of unpleasant if not disastrous consequenecs. See Aruold Wright and T. H. Reid, The Malay Peninsula, 1913; and Sir Hugh Clifford, Malayan

Monochromes, 1913. Malay States (Federated). NegriSembilan is situated immediately to the N. of the territory of Malacca, and is drained eastwards by the R. Moar. Its surface is diversified. The upper valleys and mountains are densely wooded; the lower valleys are fertile, producing rice and fruits in abund-King of Scotland, son of Kenneth II. ance. Elephants and cattle are succeeded in 1005 by defeating and reared, and tin is mined, but the in-killing Kenneth III. In 1018 he won

130,201. Pahang has an area of m. Pop. 117,595. It is 130,201. Pahang has an area of a 14,000 sq. m. Pop. 117,595. If is mountainous in the W. descending to Marsby Plains in the E., and is rich in gold, tin, and galena. In all there are 630 m. of railway in the states, including the Johar State Railway (120 f m.) which was opened for traffic in July 1400 thus ortalliciate through say. 1909, thus establishing through communication between Penang and Singapore. There are also 2232 m. of road and 1543 m. of bridge paths, while the principal rivers are navigable for small boats. The chief export and source of revenue is tin, but rubber, cocoanuts, rice, and coffee are extensively cultivated. The climate is very uniform, the average maximum shade temperature being 90° and the minimum 70°. The states and the minimum 70°. maintain a highly efficient regiment of Sikh troops, and are policed by a mixed force of Indians and Malays, officered by Europeans. The total area is 27,700 sq. m., with a pop. of 1,035,933. Perak, on the western side of the Malay Peninsula, has an area of \$1000 ca. 8900 sq. m., and is traversed by two chains of mountains rising to a height of 7000 ft. It is well watered, the ohief river being the Perak, and produces tin, rice, maize, fruits, and vegetables. In addition to tin there exists also gold, lead, zinc, tungsten, copper, bismuth, kaolin, marble, granite arsenic, mercury, nanganesc, and plumbago. The climate is healthy, and the population (494,123) consists of Malays and Chinese. mainly Sclangor (area 3200 sq. m.) stretches about 85 m. inland from the Straits of Malacca, and has mountains on its E. frontier with valuable tin mines but consists, for the most part, of lowlands traversed by the Selangor and Klang rivers. Kuala Lumpor, the capital, is also the federal capital of the Malay States. Pop. 294,014.

Malchin, a German th., dating from the 13th century, in Mecklenburg-Schwerin, situated about 25 m. E.S.E. of Güstrow on the Peone, which runs into the Kleines Hoff. Contains cement works. Pop. 7000. Malcolm I. (Macdonald) (d. 954).

King of Scotland, succeeded to the crown in 943. He made a treaty with Edmund the W. Saxon king in 945, and renewed it with his successor. Eadred, but in 950 the Scots made a foray to the Tees. They were, bowever, unable to stay the progress of the W. Saxons, and in 954 North-umbria was lost and M. slain.

Malcolm II. (Mackenneth) (d. 1034),

tle Scottish kingdom, and about the same time Cumbria N. of the Solway became an appanage of the kingdom. In 1031 M. did homage to Cauutc.

10

fat of

umbria in 1054. He married Margaret, sister of Edgar Atheling, and did homage to the English kings, 1072 and 1091. He was treacherously slain while invading Northumberland.

Malcolm IV. (1141-65) (the Maidcn), King of Scotland, succeeded his grandfather, David I., in 1153. He surrendered Northumberland and Cumberland to Henry II. in 1157, and received in return Huntingdon. served as an English baron in the expedition against Toulouse (1159), and

as a result was engaged in suppressing rebellions in Scotland (1160-64).
Malcolm, Sir John (1769-1833), an Indianadministrator and diplomatist, born at Burnfoot in Scotland. He entered the service of the East Indian Company in 1782, and in 1792 was appointed Persian interpreter to the nizam of the Deccan. From 1795-98. he was military secretary to the com-mandor in-chief at Madras, and in 1798 was appointed by Lord Wellesloy assistant to the resident at Hy-He was envoy to Persia derabad. He was envey (1800, 1807, 1810); private secretary to Wellesley (1801-2); political agont to Wellesley during the MahrattaWar (1803-4); and governor of (1826-30). He was made 1815, and was M.P. for I (1831-32). He wrote Politi of India, 1811; History of P

Malcomia, a genus of crucifers, of which the best known species is M. maritima (Virginian stock), a valuvarieties of various colours, giving a

lengthy succession of bloom.

Malda, a dist. in Bengal, India. The people are engaged in agriculture, and the products are silk, indigo, and mangoes. The Mahananda R., a tributary of the Ganges, flows through the centre of the district, upon which is situated the town of Malda, the capital. Pop. (of district) to Montevideo. Pop. 30,735. Malebranche, Nicolas (1638-1715),

Maldegem, or Maldeghem, a com. of Belgium in the prov. of E. Flanders, 9 m. E. of Bruges, Pop. 10,500. Malden: 1. A par, and vii of Surray England, on the R.

3 m. from Kingst Merton College, afterwards removed and of the fathers of the Church, till to Oxford, was founded here in 1264. Descartes's treatise, De Homine, fall-Pop. (with Coombe) 12,140. 2. A city ing into his hands, attracted him to

a great victory over Eadulf Cudel, of Middlesex co., Massachusetts, which led to the cession of Lothian to U.S.A., on the R. Malden, 5 m. N. of the Scottish kingdom, and about the Boston. It is noted for the manuf. of rubher hoots and shoes. Pop. (1910) 44,404. 3. An island in the S. Pacific which has an active trade in guano. Malcolm III. (called Canmore) (d. It was taken possession of in the name of the Queen of Great Britain in 1864.

Maldive Islands, a group of coral islands in the Indian Occan, which are tributary to Ceylon, and governed hy a sultan. They number in all about 12,000, and of these over 200 are inhabited. The natives are expert navigators, and are largely engaged in 'bonito 'fishery, indeed that fish is one of the chief exports, and is the principal article of food. Mali, or King's Is., is the capital of the group and the residence of the Sultan, and from it the trade, which is carried on chiefly with Calcutta, is conducted. The principal exports are bonite fish, tortoise shell, cocoanuts, coir yarn, copra, and cowries. The climate is unhealthy. Pop. 50,000, all of which are Mohammedans.

Maldon: 1. A municipal bor., market tn., and river port of Essex, at the influx of the R. Chelmer to the Blackwater estuary, 44 m. E.N.E. of Lon-There are manufs. of crystallised salt, brewerics, an oyster fishery, and some shipping. Many Roman remains are in the neighbourhood. Pop. (1911) 6253. 2. A mining th. in Talbot co., Victoria, at the foot of Mt. Tarrangower, 40 m. from Sand-

hurst. Pop. 2800. o the Anglo-Saxon s a contest between . later King of Nor-derman Byrhtnoth,

Administration of India, 1833; and which resulted in the death of Byrht-Life of Clive (pub. 1836). porary poem, but no one of the enemy is mentioned by name, as it was written immediately after the battle before able garden plant with numerous the poet had time to find out any information about the opponents. copy of the poem is contained in Sweet's Anglo Saxon Reader.

Maldonado, a seaport and naval station of Uruguay, on the Rio de la Plata, 70 m. E. of Montevideo. The island of Gorriti shelters its harbour. It has limestone quarries, and exports cattle and hides, and limestone

a French philosopher, born at Paris, where his father was president of the Chamber of Accounts. At the age of ho entered into the con-

the Oratory, and devoted he study of Bible history

philosophy. His famous work, De la | in 1779, are still quoted as authorities Recherche de la Vérité, was published at Paris ln 1674. It shows great depth and originality of thought, combined with perspicuity and ele-gance, had for its object the psycho-

famous Vision en Dieu), that all beings and thoughts exist in God. system is a kind of mystic idealism. It was immediately opposed by Ant, Arnauld, Bossuct, and many others, and was subjected to a thorough and critical examination by Locke and Leibnitz. Besides the work above mentioned, M. wrote a Traité de Morale, a Traité de la Communica-tion de Mouvement, and Conversations

> `Lastrea umonest green,

from a stout root stock like the feathers from a sbuttlecock, the fern exhibits wide variation in typo, and has been split up into three sub-species. The spore capsules are borne in circular sori or beaps on the back of the frends, and at first are covered by a kidney-shaped The plant, and especially tho root, contains anthelmintle properties, and a liquid extract is administered to expel tape-worms.

Malegaon, a municipality and can-tonment of the subdivision M., in British India, Bombay, on the Girna

Pop. 19,000.
Maler Kotla: 1. A native state of Indla in the Punjab, one of the Cis-Sutlei states which came under Sutic) states which came under British influence in 1809. Area 162 sq. m. Pop. 78,000. 2. A tn. of India, cap. of the above, 30 m. from Lud-hiana. Pop. 21,000. Malesberbes, Chrétien Guillaume de Lamoignon (1721-94), the associate of Turrot and those illustrious states-

men who sought by moderate reforms to prop the weakness of the old unonarchy of France, was born at Paris. Among other offices be held those of president of the Cour des Aides and minister of the king's housebold. When Louis XVI. was brought to trial, M. claimed the post of his defender. His fearless intrepidity entailed upon him the batred and suspicions of the party in power, and be was guilletined ou April 22, meeting his fate with resignation. works of M., who was a member of the French Academy and of the Academy of Belics Lottres and Inscriptions, are mostly on subjects of any special significance, and in pracnatural history and rural economy. tically all cases it merely connotes His Discourset Remonstrances, printed that which is unlawful and is tanta-

on financial questions.

Malet, Sir Edwin Baldwin (b. 1837), an English diplomatist, born at the Hague, Holland. Became charge des archives at Paris, holding the pist during the Commune. He was minis-ter-plenipotentlary at Constantingle from 1878-79 and at Brussels in 1883; ambassador at Berlin during 1884 95. and a member of the International Arbitration Court at the Hague in

Malet, Lucas, KINGSLEY. sce CHARLES.

Malherbe, François de (1555-1628), was born at Caen in Normandy. He accompanied Henri of Angouleme, son of Henri II., who went to Provence as governor in 1579, and remained attached to his honsehold till that prince's death in 1585. He was patronised by Henri IV., upon whose death his widow, Mary dc Medicis, settled a pension upon him. M. has been styled by competent judges the restorer of the French language and poetry. See Vie de Malherbe, by

Racan, Œuvres, Paris, 1797. Malibran, Maria Felicita (1808-36), an operatic singer, born at Paris, a daughter of Manuel Garcia, a Spanish tenor. She made her début in 1825 in The Barber of Seville at Covent Garden, and then went to America. She later sang with great success in Franco

and Italy.

Malic Acid, or Monohydroxysuccinic Acid (C.H.O.), an organic acid which occurs in the free state and in the form of its salts in many fruits, including asb ber

crystals solves readily in water and alcohol. It may be prepared by boiling bromo-succinic acid with silver hydroxide and water, or by treating aspartle acid with nitrous acid. It is usually obtained by squeezing the juice out of unripo mountain-ash berries; the juice is boiled with milk of lime, and the resulting precipitate is dissolved with hot nitric acid, crystals of cal-clum bydrogen malato being formed. The salt is then decomposed with oxalic acid.

Malice, in popular language means ill-will or spite against a particular person or class of persons. In law it occasionally

in the case c prosecution law of libel defence of '

buttable by proof of such M. In the defendant. But its general use in the criminal law is notoriously devold of tically all cases it mercly connotes asca in law in the non-technical sense, is generally called express M., or M. in fact, in contradistinction to technical or implied M., i.e. the M. or criminal intention that is really nothing more than an inference of law resulting from doing the objectively criminal act. For the law infers that every one must contemplate the nccessary consequences of his own act and that every act in itself unlawful, is wrongfully intended, i.e. is malicious,' in the absence of proof to the contrary; or, in other words, the wilful doing of a wrongful act without lawful excuso is 'malicious' apart from moral considerations of malevolence or any other state of mind indicative of motive, e.g. mur-der is generally defined as killing with M. aforethought, or prepense, while manslaughter (q.v.) Is defined as killing another without M., either express or implied. There is an obvious danger of confusion here, though in practice tho law is perfectly clear. Any act the likely consequence of which to the knowledge of the agent is the death of another is murder, and it is a matter of complete indifference to the law whether the murderer had or had not tho slightest wish to injure or whether ho had any knowledge of the deceased at all. (See also Malicious Injuries to Property.) In civil actions M., or indeed any other state of mind, is for the most part irrelevant. It was, how-ever, doubted for some time whether, in actions for procuring breach of con-tract (generally actions against trade unionists by aggrieved omployers), M., in the sense of personal ill-will or intent to injuro the plaintiff rather than benofit the defendant, was not the whole gist of the action, but it is now settled law (1) that a violation of a legal right committed knowingly gives a right to sue for damages, not on the ground of malicious intention, but simply because the interference with other people's contractual relations is wrongful if not justified; (2) if such violation or interference be unjustifiable, the presence or absence of M. is immaterial to the cause of action.

Malicious Injuries to Property are classified in the English criminal law either according to the nature of the property or the manner of injury. They are for the most part dealt with in the Criminal Law Consolidated Act, 1861. Arson is treated as a distinct specific offence, though there is one scientific reason for so doing. Every kind of arson is a felony, and in all but one case (attempting to set fire to crops and stacks—seven years) the punishment may be up to fonrteen years' penal servitude, penal of a jury, or whose prosecution is servitude for life, and in two cases summarily dismissed by justices, will

mount to criminal intent. M., when death (arson of ships and vessels). used in law in the non-technical Malicious injuries to honses by explosion so as to endanger life is a felony punishable by penal servitude up to life; but euriously enough the maximum punishment for malicious injury to vessels by explosion is only seven years, while a life sentence may be given for malicious injury by altering signals so as to endanger vessels. The Act further deals with these specific malicious injuries: forcible demolition of buildings, machinery, mine bridges and ways; destruction of manufactures and machinery, or goods in process of manufacture; damaging mines by water; destruction of vessels wrecked or destruction of vessels where of the stranded; damaging sea and river banks, dams, and walls; destruction of bridges, viaducts, aqueducts, and turnplkes; putting or throwing any obstacle across any railway or interfering with railway signals; destructions of the strandard of the tion of dams and sluices of fish-ponds so as to cause loss of fish; killing or maiming cattle; injury to trees and plants and bopbinds; and damaging books, works of art, eto., in public museums. The punishments range from a minimum of five years up to llfo imprisonment, while lesser injuries may be disposed of summarily by magistrates. 'Malicious' is used technically, and means no more than unlawfully, for it is not necessary to prove that the accused was actuated by malice against the owner of

the property.

It will long be remembered that in 1912 and 1913 the activities of the militant body of agitators for the female vote found expression in various of the above-noted forms of M. I. to P., but though explosives have been used it is noteworthy that up to the time of writing (May 1913) no loss of life has yet been caused. In the spring of 1913 some priceless paintings belonging to the Manchester Corporation were cut about beyond redemption, while at the time of writing an old country mansion, valued at £15,000, was burnt down: and an attempted injury was that to St. Paul's Cathedral, where a clockwork bomb was discovered lying near the reredos. The fact that these injuries, or attempted injuries, are committed in pursuance of a political campaign is no defence to a prosecution in a criminal court.

Malicious Prosecution. motion the machinery of the criminal law against a person without 'reasonable and probable cause 'for so doing, renders the prosecutor liable to an action for M. P. But not every person who gets an acquittal at the hands

necessarily succeed in a civil action of Indicate provious fracture of some M. P. If a crime has been committed and the circumstances were such that the prosecutor had reasonable eause for believing that the plaintiff (in the civil action) was probably the guilty person, ho is justified in protecting his interests by prosecuting him. It is on the plaintiff, if the judge decides that there was an absence of reasonable and probable cause, to prove affirmatively, to the satisfaction of the jury, that the defendant (prosecutor) was actuated by malice or some indirect motive like personal spite or ill-will against him; but if the judge decides on the facts that there was such cause, then malicious motives are immaterial, and there is no ease to go to the jury. As a rule a claim for damages for M. P. is joined with a claim for false imprisonment (q.v.), for there cannot be a prosecution without at least technical imprisonment. The false imprisonment, however, is more or less merged in the M. P. where joined with such a ciaim. See also VEXATIOUS INDICTMENTS.

Malignant Pustules, see ANTHRAX. Malignants, a name given by the Parliamentarians to the Royallsts during the Great Rebellion in Eng-land. It occurs in the Great Remonstrance of 1641.

Malinao, a pueblo of Albay prov., Luzon, Philippino Is. Near it is the extinet Malinao voicano. Pop. 12,437. Malindi, a seaport of British E. Africa, at the mouth of Sabaki R., 70, m. N.E. of Mombasa. Vasco da Gauna visited it in 1498 and raised a

pillar. Pop. 5000.

Malines, or Mechlin, a tn. of Belgium in the prov. of Antwerp, on tho Dyle, 12 m. S.E. of Antwerp. It has a cathedral, and was formerly noted for its lace manufactories. Woollen goods and Gobelin tapestry are now made. There are several churches in M., some of which contain pictures hy Rubens. Of these the finest is that of 'The Adoration of the Magi' in the Church of St. John. The town is well built, and has broad streets. 59,372.

Malingering, a word of obscure derivation, but according to Cotgrave, comes from the Fr. malingre, sickly, formerly 'sore,' 'scabbie,' 'ouglic.' It denotes pretending or feigning illness for any purpose, but especially to evade military or naval duty. M. is also a common practice of mendicants to avoid labour, paupers to shirk allotted tasks, and criminals to prevent the infliction of punishment. As may be imagined, M. is much resorted to in countries where there is conscription. It takes various forms, e.g. military doctors have found

part of the skull; an appearance of fever has been induced by swallowing tohaeco juice, or hy various stimu-lants, such as brandy or eantharides; lamcness by tying ligatures round the leg, eausing it to swell; internal remedies have heen used to produce cardiac derangement, e.g. soldiers at Chatham a century ago in the old General Hospital used to take fifteen grains of hellebore, which produced great excitement, and maintained that condition by taking four grains daily. But there is hardly any limit to the kinds of disease that may not be more or less successfully feigned, so much so, according to Fodere, that it was brought to such a pitch of perfection in France as 'to render it as difficuit to detect a feigned discase as to cure a real one.' Maladies of the nature of inflammations, purulent expectoration, and fevers are, however, not easily feigned, nor any disease whose diagnostic symptoms are well settled, and which operate to produce a perceptible systematle change. It is otherwise with diseases symptomatically uncertain or variable and characterised by no peculiar outward appearance, liko cpilepsy and insanity. If great ingenuity has been exerted in feigning disease, an equal degree of it has often lcd to detection, e.g. feigned lumbago has been detected in a moment hy holding the malingerer in an interesting conversation whilst an assistant, stealthily approaching from behind, pierces him with a needle, with the result that the patient, forgetting his iumbago, shoots bolt upright; and it is recorded that the celebrated Abbé Sicard unmasked a pretended deaf and dumh person named Victor Foy by proving that the malingerer wrote from sound, whereas the congenitally deaf and dumb write only as they see. It is hardly necessary to say that M. per sc is no offence apart from the special caso of soldlers and sailors unless the malingerer's assumed illness is for the purpose of obtaining money, and he actually attempt so to obtain it. Under the Prison Act. 1877, a test involving pain, to detect M., may only be employed hy tho authority of an order from the visiting committee of justices or a prison commissioner.

Mallaig, a vil. of Inverness-shire, Seotland, on the coast at the entrance to Loch Nevis, 8 m. E. of the Point of It is a calling place for the Sleat. coast steamers.

Mallard, properly the male wild duck, but commonly used of duck and drake alike. It is widely disand drake alike. tributed over almost the whole picces of metal inserted in the head to northern hemisphere, and is the an-

is brown. onths the

drake resembles her.

Mallarmé, Stéphane (1842-98), a French poet and theorist, born in Paris. He was professor of English at Tournon, Besancon, Avignon, and Paris successively. In 1876 he published his L'Après-midi d'un Faune, and in 1887 Poésies Complètes. His volume Vers et Prose, containing some

hammered or rolled out in a thin more general property of plasticity, but the most malicable metals are not by any means the most ductile; lead, for instance, may be beaten into a very thin sheet, but cannot be drawn out into a fine wiro. The property of

aro carried on. The chief .

are wheat and cattle.

West, two adjoining parishes in Kent, England, in the Medway div. E. Malling is 4 m. encalyptus dumosa and oleosa, two dwarf species of the gum-tree, which are able to live under extremely adverse conditions, and form dense thickets over tracts of country, called M. scrub.

West, two adjoining parishes in Kent, England, in the Medway div. E. Malling is 4 m. W.N.W. The latter has the remains of a Benedictine nunnery, adverse conditions, and form dense founded in 1090. Pop. (1911) 2300. Mallock, William Hurral (b. 1849), an English author, was educated M. scrub.

Mallein, a cultural preparation of the glanders' bacillus, which if injected

Wimbledon, and educated at Win-chester. He obtained a cadetship in the Bengal infantry, and in 1852 Classes and Masses; Aristocracy and served in the second Burmese Was as a Credible Doc-His subsequent appointments in the civil line. For some tim

cestor of some of the domesticated varieties, with which it freely breeds in captivity. From October till the ptime the eggs are hatched, the plumage of the male is very beautiful. Tho head and neck are rich glossy-the distinct the property of Appanistant, History of the French front rich in India.; and The Founders of the control of Appanistant, History of the French front rich in India.; and The Founders of the control of Appanistant History of the French front rich in India. greyish- Indian Empire. He also re-wrote the the legs History of the Indian Mutiny left uncompleted by Sir John Kaye.

Mallet (originally Malloch), David (1705-65), a poet and miscellancous writer, educated at Crieff parish school and the University of Edinsonool and the University of Edin-burgh, where he met Thomson. In the following year appeared his ballsd of William and Margaret, by which ho is chiefly remembered, and which made him known to Pope, Young, and others. His Excursion, an inita-tion of Thomson, was published in 1728. At the request of the Prince of Wales, whose secretary he had of his most important works, aption of Thomson, was published in peared in 1893. He had previously 1728. At the request of the Prince published in 1888 a notable translat of Wales, whose secretary he had tion of the poems of Edgar Allen Poe become, he wrote with Thomson a and some essays of literary criticism. masque, Alfred (1740), in which Rule His poems as a whole contain some Britannia first appeared, which, verses of extraordinary beauty and although he claimed the authorship, grace, but are, for the most part, is now generally attributed to Thom-wrapped in mysticism, and are not very intelligible.

Malleability, that property of a motal by virtue of which it can be sinceure. In addition to the works above named, M. wroto some in-It forms with ductility the different dramas, including Eurydice,

Mustapha, and Elvira.
Mallet, Paul Henri (1730-1807), horn at Geneva; became professor of belles-lettres at Copenhagon. He was very thin sheet, but cannot be drawn out into a fine wiro. The property of Upsala, and became also correspond-M, varies with temperature, and the and became also correspondent of the ordinary metals, lead by hammering, and gold by rolling can be reduced to the thinnest sheets.

Malleco, an inland prov. in Chile, cap. Angol. The centre consists of a Bishop Perey under the title of rich plain where agricultural made a momber of the academy of

West, two ad-

an English author, was educated privately and at Bsliol College, Oxford. His works deal with political, verifies the presence or absence of philosophical, economic, and religious verifies the presence of absence of philosophical, economic, and rengated glanders in horses and is prophylactic, questions, and he has also written Malleson, George Bruce (1825-98), novels and poems. The chief are: The an Indian officer and author born at New Republic; Is Life Worth Living? Wimbledon, and educated at Win-The New Paul and Virginia; Property chester. He obtained a cadetship in and Progress; Social Equality;

> ıs a Business Firm. :els are: A Romance

and The Veil of the Temple.

Mallorca, the Spanish name for

Majorca (q.v.).

Mallow, a tn. in co. Cork, Ireland, on the Blackwater, 17 m. N.N.W. of Cork. Y and has tl

ning is car

mills and salt works. Pop. about He also wrote 4500.

Mallow, or Malva, a genus of hardy annuals and perennials. The musk M. (M. moschata), with roso or white flowers, is grown in gardens.

Malmaison, a chatcau in dept. of Seine, France, 5 m. W. of Paris. Noted as having been the residence of the Empress Josephine after her divorce

from Napoleon.

Malmedy, a tn. in Rhenish Prussia, 11 m. from the Belgian frontier, and 25 m. S. of Aix-la-Chapelle. Until the close of the 18th century, it was the seat of a Benedictine abbey. Chief industry, leather making. Pop. ahout 5000.

Malmesbury: 1. A market tn. in Wiltshire, England, 191 m. N.N.W. of Bath, picturesquely situated on the Avon. The parish church was formerly the Saxon abbey where Athelstan was huried, and contains a heautiful Gothle market cross (time of Henry VII.). The manuf. of silk and pillow-lace is carried on. Pop. (1911) 2657. 2. A municipality of Cape of Good Hope, 35 m. N.N.E. of Cape Town. Has salt-pans and sulphur springs. Pop. 3800.

Malmesbury, James Harris, Earl of (1746-1820), was the only son of James Harris, the a

and other well-kno works. He was born

the autumn of 1767, he was, through the patronage of Lord Shelburne, appointed secretary of embassy at Madrid. The temper and firmness, as well as talent, with which Harris had managed his negotiation with regard to the Falkland Islands, gave so much satisfaction to his government that he was the following year appointed to the post of minister at the court of Berlin. He retained this In 1777 he mission for four years. was sent as ambassador to St. Petersburg, and having in the meantime re-ceived the Order of the Bath in 1780, he remained in Russia till his health eompelled him to return home in 1784. In 1788 Mr. Pitt offered Sir James Harris the post of minister at services while here, Sir James was I. Malo-les-Bains, a scasido resort of raised to the person of th raised to the peerage as Baron M. the marriago hetween the Prince of Luzon, Philippines, 15 m. N.N.W. of

of the Ninelcenth Century; The Old Wales and Carolino, daughter of the Order Changes; A Human Document; Duke of Brunswick, and accompanied The Heart of Life; The Individualist, her to England. His grandson published his Diaries and Correspondence.

Malmesbury, William (c. 1095-1143, an Anglo-Norman chronicler, became a monk in the monastery at Malmeshury, and later librarian and pre-centor. His C gives the hizte

land from the

lorum, 1125 (revised 1135-40); De Antiquitate Glastoniensis Ecclesia; Historia Novella (a sequel to the Gesta Regum); an account of the church at Glastonbury; and a Life of St. Dunslan. M. took part in the council of Winchester against Stephen in 1141. See Stubbs's edition of Gesta

Regum Anglorum, 1887-89. Malmö, a fortified tn. of Sweden, on the Sound, cap. of prov. of Malmöhus, and one of the most fertile districts of the kingdom. It is an important railway terminus and has a citadel and port with three harbours. It has a good trade in grain and whisky, and manufs. gloves, tobaceo, cotton, ctc. There are also iron works and dock-yards. The chief buildings are a town hall, hospital, and theatre, and several old churches. Pop. 88,158.

Malmsey, a sweet and luscious white wine, originally brought from Malvasia or Malvoisie in the Morca, and hence sometimes known as Malvoisie. Vines of this variety were planted in Teneriffe, Madelra, and the Canary Is., and M. wine used to he made from a grape grown on the rocky ground of Madeira.

Malmström, Bernhard Elis (1816-65), a Swedish poet, born at Tyss-

ame professor of University.

Angelika cludes, (1840), a volume of elegies and two volumes appearing in 1845 and 1847. He was a severe critic of the Romantle school, and wrote some valuable hooks on artistic and literary history, best heing a monograph on tho

Franzén. Malo, a market tn. in Venezia, Italy, 10 m. N.W. of Vicenza. Pop.

6000. Maloarkhangelsk, a tn. of Russla, in the prov. of and 85 m. S.E. of Orel.

Pop. 8000.

Maloja, a mountain pass in the Alps, Switzerland, 9 m. S.W. of St. Moritz, at the head of the Inu Valley, Upper Engadine. Altitude 5943 ft., the lowest of the passes be-Altitude tween Switzerland and Italy.

Malone Malta

region, the chief erop being rice. Pop. 12,500. It is situated in a fertile to

Malone, the cap. of Franklin co., New York, U.S.A., on the Salmon R., 57 m. W. of Rouse Point. It is situated in the midst of a rich farming eountry, hops being the chief crop of the district. It has an iron-foundry, paper and flour mills, and railway repair shops, and manufs, woollen goods, paper, and pulp. Pop. (1910) 6467.

Malone, Edmund (1741-1812), an author, was educated at Trinity Colego, Dublin, and called to the Irish bar in the late 'sixtles. He came to London in 1777, and eight years later was elected to the Literary Club, with the most prominent members of which, Johnson, Burke, Reynolds, and Boswell, be was on intimate terms. He devoted himself to the study of Shakespeare. In 1778 ho published an Attempt to ascertain the Order in which the Plays of Shake-speare were written, and from 1783 worked at his edition of Shakespeare, which appeared in 1790. In 1800 In 1800 Dryden's appeared his edition of Dryden's Works, with a biographical intro-

Works, with a biographical intro-duction. There is a biography by Sir James Prior, 1864. Maionio Acid, CH₂(COOH),, an organic acid formed by the exidation of malie acid. It forms colourless orystals melting at 132°, and is readily soluble in water, alcohol, and ether. When heated above its mething point, it decomposes into acetio acid and carbon dioxide.

Malope, or Mailow-wort, a genus of hardy annuals, with large flowers of white, rose, or purple colour, and grown for their ornamental effect in sunny beds and borders. Malory, Sir Thomas (A. 1470),

Malory, translator of Morte d'Arthur. Very little is known of him. An endeavour Very has been made to identify him with a Sir Thomas Malory of Warwickshire, who fought successively on both sides in the Wars of the Roses, sat in parliament from 1444-45, and died in a continuous story of the Arthurian legends, and showed judgment alko in what he included and omitted. His

eminent Italian anatomi Bologna. He held, periods of his life, the

Rome and appointed cblef physician and chamberlain to Pope Innocent XII. Chiefly known for his discoveries in the anatomy of the skin, kidney, and spleen, the Matpighian bodies or corpuscles of tho kidney and the spleen still retain the namo of their discoverer. He was also the first to examine the circulation with the microscope, and thus discovered the blood corpuseles.

Malpighia, a genus of small over-green trees and shrubs with pink or white flowers, followed by fleshy fruit which is edible. M. urens has stinging properties, but is sometimes grown M. glabra, the furnishes the in the stovebouse.

Barbadoes cherry, fu popular W. Indian fruit.

Malpigbiacem, a natural order of trees and shrubs, occurring mostly in the southern hemisphere, with glandular five-parted calyx, five pctais spurred at the base, and fruit a drupe, woody nut or samara.

Malplaquet, a hamlet in dept. of Nord, Franco, noted for the victory of Mariborough and Princo Eugeno over the French in 1709. It is 21 m. E. by

S. of Valenciennes.

Malstatt-Burbach, a tn. in Rhenish Prussia, on the Saar, 38 m. S.S.E. of Trèves, now incorporated with Saarbrücken. Has large iron works, and is the centro of the coal district. Manufs. cement, rails, and machines. Malström, see MAELSTRÖM.

Malström, Carl Gustav (b. 1822), a Swedish historian. In 1863 he ob-Swedish historian. In 1863 ne ontained a professorship at Lund, and in 1877 became professor at Upsala, and a member of the Academy. He was keeper of the Record Office during 1882-87. His works include Sveriges Politiska Historia, 1719-72, and Ri.

1 possesslo m. long by about 9 m. broad, with an area of about 95 sq. m.; it is of carbonaccous limestone, of the tertlary aqueous formation, and occupies a very central position in the Mediterranean Sea, 1471. In his book be strove to make being distant some 54 m. from the Sicilian coast and about 200 m. from Cape Bon on the African coast. Between it and Gozo (q.v.) lies the small work was finished in 1469 but was island of Comino, and off this last the not published by Caxton until 1485; still smaller islet, Cominotto, rears before the middle of the 17th century its rocky crest, while elsewhere round still smaller islet, Cominotto, rears its rocky crest, while elsowhere round the shores of M. and Gozo a few rocks Seven editions had appeared.

Malpas, a market tn. and par. in stud the sea, sustaining each a few Cheshire, England, 14 m. S.S.E. of Chester. Pop. (1911) 4643.

Malpighl, Marcello (1912) 4643.

Malpighl, Marcello (1912) 4643.

Malpighl, Marcello (1912) 4643.

low, its highest point not 90 ft. above the sea-ievel. is diversified by a succes-

of medicine in Bologn. and daic, the land being Messina. In 1691 he was summoned intersected by parallel valleys, run-

ing from S.W. to N.E., the most considerable of which is the vale called M. shows no signs of volcanie formation, but the action of tho sea among its cliffs has hollowed out grottoes and caverns in almost every direction, and some of considerable extent. The inhabitants are good agriculturists. agriculturists. Mules and asses are remarkable in M. for their strength and beauty, but the horned cattle are small. Maltese goats are very fine animals. The hees produce an aromatic honey, excelled in no other locality. The vegetable products comprise all that flourish in Italy, as Mules and asses are comprise an that nourism in tady, as aloes, oranges, and olives, with many plants of a more tropical growth. Citta Vecchia, or Notabile, the former capital of the island, is a handsome old town lying inland; it contains the ancient palace of the Grand Masters of the Order of St. John, the cathedral, a college, and is still the seat of the bishopric. Its rival and successor is Valetta (a.e.) It is thought by is Valetta (q.v.). It is thought by some that M. was the Hyperion or Ogygia of Homer, but there is little doubt that the Phænicians colonised the island at a very early date, probably in the 16th century B.C. Before they were dispossessed by the Greeks in 736 B.C., they had developed considerable commerce. The Greeks called the island Melitas, and were driven out by the Cartbaginians about 500 B.C. As early as the first Punio War it was plundered by the Romans, but did not come finally into their possession until 242 B.c. During the 5th century it fell successively under the Vandals and Goths, whose barharism nearly annihilated its com-merce. In 533 Belisarius recovered M.

almost vanished nmid constant local feuds. In 870 the Arabs destroyed the Greek power in M., and fortified the harbour as a station for their corsairs. Count Roger, of Sicily, drovo out the Arabs in 1090, and established a popular council for the government of the island, com-posed of nobles, clergy, and elected representatives of the people. This council, in a more or less modified form, subsisted for 700 years. Under a marriage contract, M. passed to the German emperor, who constituted it a marquisate, but it had ceased to be a place of trade and was merely a garrison of more expense than value. Charles of Anjou, after overrunning Sicily, made himself master of M., which clung to the French even after they had been expelled from Sieily, but after a time the houses of Aragon and Castile successively held the presence of the micrococcus melitensis

island. Subsequently, the Emperor Charles V. took possession of M., and, in 1530, granted it, with Gozo and Tripoli, in perpetual sovereignty to the Knights of the Order of St. Jehn of Jerusalem, from whom the Turks had recently captured their great stronghold at Rhodes. The Grand Master of the Knights defended the island ngainst the Turks in 1565, and founded Valetta. In 1571, they, with the Maltese, behaved most courage-ously at the battle of Lepanto, where the Turks lost 30,000 men. Though waging perpetual war with the Meslem, the knights continued in possession of M. until 1798, when overeome by Bonaparte's treachery and disorganised by internal quarrels, the order surrendered their noble fer-tresses to the French. M. became a part of the British empire in 1814. The commandant of the garrison is governor, and is aided in the civil government by an executive council. The revenue amounted, in 1910-11, to £441,444; but was exceeded by the expenditure, £467,373. Imports expenditure, £467,373. Imports (1910-11) amounted to £2,355,643 and exports to £563,429. Pop. 228,442. Malta, Knights of, see Hospitallers. Malta Expension

Malta Fever, or Mediterranean Fever, a specific febrile affection prevalent at one time in Malta and Gibraltar and along the Mediterranean coasts generally. The symptoms are prelonged and irregular high temperature, rheumatic and nervous pains, frequent constipation, and extreme debibty. The temperature may rise to 106°, and even to 110° in fatal cases. The course of the disease lasts for a few months, but it may be prolonged to a few years. The cause of the fever has been discovered by Sir David Bruce to be the presonec of a specific ···· ococcus

perlod is from oecurreneo of rock fever in Gipraitar was traced to infection from the milk of goats imported from found to be

hibition of goats the disease disappeared from Gibraltar. Later the fever has been stamped out in Malta by the same measures, and still more recently at Port Said. The fever has been found to be more widely distributed than was formely supposed. It is common in N. Africa, and is even found in S. Africa, while a group of cases was recently reported from S.W. Texas. Sir David Bruce described at the annual meeting of the Research Defence Society in 1910 the occurrence of Malta fever in Ankole, on the eastern shore of Lake Albert Edward.

As in all other cases reported, the

disease, and infection was traced to the goats of the district.

Malt and Malting, see Brewing.

Malte-Brun, Conrad, or Malte Conrad ies. and foundries. Pop. (1911) 4822. Bruun (1755-1826), a Danish-French geographer and publicist, banished ing the molecular formula $C_{12}H_{12}O_{11}$, from Denmark (c. 1796) for his violent, that is, having the same percentage political par

principles of With Mente laborated in graphical So

Annales des voyages . . . () which he edited with Eyriès. Annales des Precis de la Géographie universelle prepared from malt. As the grains (1810) was completed by Huot (1829). of barley germinate, the enzyme dias-(1810) was completed by Huot (1829). His poems also were much admired. See Bory de Saint-Vincent, Notice biographique, 1827; Quérard. France Littéraire

Malte-Brun, Victor Adolphe (1816-89), a French geographer, son of Conrad. He was professor of history at Pamiers (1838), and at various colleges. In 1847 he took up geocolleges. In 1847 he took up geo-graphical studies, and became general secretary of the Société Géographique in Paris. He published a new edition of his father's Géographie (1852-55), wrote La France Illustrée (1855-57), and was objet editor of Nouvelles

Annales des Voyages.

ancient lap-dog, its type and charthousand years. is doubled into the coat on the back.

Thomas Robert (1766-Mathus, Thomas August 11100-11834), a political economist, was a pupil of Richard Graves and Gilbert Wakefield, and afterwards went to Jesus College, Cambridge, where he distinguished himself in classics and mathematics. He entered the Church and in 1798 was curate at Albury in

> Principles of h a view to their There (1820).

is a biography by James Bonar, 1885.
Malton, a market tn. in the North
Riding of Yorkshire, England, on the
Derwent, 171 m. N.E. of York. Burnt
in Stephen's reign, it was rebuilt as New Malton. There are remains of a The c 12th century priory and of a grammar saline,

was shown to be the cause of the school of Edward VI.'s time. and whinstone are quarried near. Agricultural implements are manufactured. There are corn mills, brewer-

Maltose, a di-saccharosc sugar, hav-

ugar and milkin the form of cule of water of produced by the h; the action is presence of an

(1808), enzyme diastase, and is an important item in the process by which beer is tase is formed, and when germination is stopped by heat and the malt mixed with water at about 60° C., fermentation sets in which converts the starch into dextrin and M. The enzyme M. then converts the M. into glucose, finally converted which is alcohol. See FERMENTATION.

Malung, a vil. of Kopparberg lan (province), Sweden, 65 m. from Falun. Its millstone quarries are im-

portant. Pop. 7035. Malus, Etienne Louis (1775-1812),

males des Voyages.
Maltese Dog, often, though wrongly, decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided him to enist as a communication of the decided himself at the decided himself acter having been preserved for over Lepère sent him to the Ecole Poly-The eoat technique (1793). Captain (1796), two thousand years. The cost beeningue (1795), captain (1796), reaches nearly to the ground, and is with the Egyptian expedition (1797), straight and silky and parted from Sub-director of Strasbourg fortificahead to tail; it is pure snowy white. thous (1806-8). Wrote his Traité The eyes are dark, the nose black, d'Optique Analytique (1807). Made the drop ears long, the back and legs brilliant discoveries in the polarisahort, and the feet small. The short tail tion of light reflected from water or is doubled into the cost on the book. glass.

Malvacem, a large natural order of herbs, shrubs, and trees most numerous in the tropics. They are all free from unwholesome qualities, and contain a quantity of mucilage, which is extracted by boiling from certain species and is used medicinally. The most important genus of the order Surrey. He had already begun to is Gossypium, to which belong the cotton-producing plants.

Malvastrum, a genus of perennials (order Malvaceæ), with spikes of scarlet, salmon-pink, golden, or purple flowers. The dwarf species are sometimes grown in sunny rockeries, but need winter protection.

Malvern, or Great Malvern, a health resort and inland watering-place of Woreestershire, England, near the Worestershire, England, hear the Sovern, on the slopes of the Malvern Hills, 8 m. from Worcester, compris-ing the villages of Malvern Link, Malvern Wells, and Little Malvern. The climate is bracing, and its alkaline. and

springs are noted. The 11th-century, Beuedictine priory has been restored as a parish church. Malvern Col-lege (an important public school) Pop. (urban district) (1911) is here. 16,514.

Malvern: 1. A suburb of Melbourno (5 m. S.E.), Victoria, Australia. Pop. 10,000. 2. A suburb of Adelaide,

S. Australia.

Malvern Hills, a hill rango on the borders of Worcestershire and Here-fordshire, England. They extend for 9 to 10 m. with abrupt heights, such as Worcestershire Beacon (1395 ft., highest point), and Herefordshire Beacon (1300 ft.), an ancient British fortress.

Calcolor Managering of managers of the ountry '), bounded

, by the Aravalli range, N.E. by the valley of the Ganges, and E. by Bandelkhand. Among its chief feudatory Jaora, Rajgarh, and Nimach. The chief city, Mandu, is in ruins. It is noted for a control of the chief city. noted fc bay). in area. Central

Malwan, a seaport, containing Rajkot Fort in Ratnagirl dist., Bombay, British India, 50 m. from

Bombay, British India, 50 m. from New Goa. It was once a stronghold of the Maratha pirates. Salt and fron oro are found near by. Pop. 20,000. Mamaroneck, a tn. of Westellester co., New York, U.S.A., on Long Island Sound, 20 m. N.N.E. of New York. It includes Larchmont village and part of Mamaroneck village. Pop. (1910) 5699.

Mambajao, a tn. in the dist. of Misamis, Philippines, on the N.E. of Camiguin Is., off Mindanao.

18,000. Mambusao, a pueblo (tn.) of Capiz prov., Panay Is., Philippines, on the R. Malinannang, 16 m. from Capiz.

Pop. 10,000.

graphy .

Mamelukes (Arabic memalik, slave), a former class of slaves in stave), a former class of slaves in Egypt, who became and long re-mained the dominant people of that country. Their dominion continued in Egypt for 263 years, and during that time they made many important conquests, and in 1291 drove the Franks entirely out of the East. They had their origin in the importation had their origin in the importation had their origin in the importation into Egypt of a large number of Turkish slaves from the Caucasus and neighbouring regions by the sultan of Egypt in the inddle of the 13th ceutury. They soon displayed insubordination, and finally, in 1254, appointed one of their own number sultan of Egypt. From this time to the Ottoman conquest in 1517, Egypt | Ornithorhyneus (q.v.), nativo of Aus-

and Syria were ruled exclusively by the Mameluke dynasty. In 1811, by a stratagem, a general massacre of the M. was ordered by the Pashn of Egypt, Melicanet Ali. The few survivors managed to escape to New Dongola, but were practically exterminated in 1820. They were famous for their courage and skill in horsemanship, and their military organisation was far in advance of their time. They were also munificent patrons of art and literature. See W. Muir, The Mameluke or Slave Dynasty, 1896.

Mamers (ancient Mamercia), a tn.

of Sarthe dept., France, 14 m. E.S.E. of Alencon. It has two old churches dating from the 12th and 13th centuries respectively. Munufs, include woollen and linen fabrics, and hosiery.

Pop. 5900.

Mamiani, Terenzio della Rovere, Count (c. 1799-1885), an Italian statesman and writer, supported the revolutionary outbreaks at Bologna (1831) on the accession of Pope Gregory XVI. Exilod for a time, he returned to Italy (1846), founded, with Globerti, the Society for the Advancement of Italian Unity at Turin, and became professor of philosophy there (c. 1855-60). In 1849 he established the Academia di Filosofia Italica at Genoa. He was Minister of Education under Cavour (1860), minister to Athens (1863), and to Bern, Switzerland (1875). His works include: Kant e Prondogna, 1879; Religione dell' are interpretable for the Advance of Education under Cavour (1860), minister to Athens (1863), and to Bern, Switzerland (1875). His works include: Kant e Prondogna, 1879; Religione dell' are interpretable for the Advance of the Mostica), 1886. Concept Gastand, Vida, 18 Count (c. 1799-1885), an Italian states. pari, Vila, 18 ritrulti, 1893; and Casini (1896).

Mamilius, or Mamilia Gens, a name of a distinguished plobed in family of Rome, who came or inginally from Tusculum in anciont fitaly. They claimed descent from the daughter of Talaxan was remarked for rameu descent from the daughter of Telegonus, reputed for inder of Tusculum. The gens compressed the three families Limetanus, Turrinus, and Vitulus. Octavius Malmilius led the Latins against Rome affer Tarquin's expulsion, and was killed at Lake Regillus (c. 496 n.c.).

Mammals, or Mammallin, a classification invented by Linneus for those vertebrates which suckle their young. Until 1884, it was supposed that they were also consistent in being viviparous, but it was then demon-strated that low forms of M, still exist which lay eggs. These, comprising three species of a single order Monotremata, have been placed in a sub-class Prototheria or primitive animals. The best known of these interesting links with the reptiles is the

to the marsupials which comprise a second of the sub-classes of M., Meta-theria. This sub-class is characterised by the possession of the marsupium, a permanent pocket in which the young are placed as soon as born. In these the period of gestation is short, and the young, helpicss, are but little developed when born. They attach themseives to a teat and the milk is forced into their throats by muscular action on the mother's part. For a long time, marsupials were believed not to form a placenta, but the occurrence of this complex structure has been discovered in them in a small state. Except for the opossum of N. America and a few S. American species, the Metatheria are new confined to Australasia, although at one time their distribution was very extensive, indeed many of the higher M. are believed to be descended from them. They vary widely in their types and habits; some are herbivorous, some rodent, and some carnivorous. The third subclass of M. is the Eutheria. In all the members of this sub-class the reproduotivo organs are highly doveloped, the period of gestation is relatively long, and the young are born in an advanced state of development. This sub-class has been variously classified, but the general modern arrangement is in nine orders, as follows: (1) Eden-(2) Sirenia, tata, (3)

are important features and of great assistance in classification. Generally speaking, M. arc terrestrial in habit, but the Sirenia, Cetacea, and sea Carnivora are important exceptions. The fact that they are air breathers, having no gills, or their equivalent, which would enable them to stay under water for more than a limited period, proves that they are only land animals which have adapted themselves for an aquatic life. The only M. with true powers of flight are tho Chiroptera or bats. Other soealled flying animals have only a broad fold of skin ou each side of the

train and Tasmania. The others are legs. All M. bear some hair at some the spiny ant eaters (Echidna), also period of their existence, even if only train and Tasmania. The others are tegs. All M. bear some hair at some thos spiny ant eaters (Echidna), also period of their existence, even if only natives of the same continent. The female Echidna produces a tomporary pocket for her young, which disappears when they are able to skin displaces it. The Edentata, disappears when they are able to skin displaces it. The Edentata, which includes the sloths, ant-eaters, and in this and Armadilloes are characterised by respect exhibits some relationship the absence of teeth in the front of the the maximized which accurates and the jaw, many are arboreal, and some are burrowing animals. The Sirenia includes only two genera of living animals, a third, Steller's Rhytina, became extinct early in the 19th century. To this order belong the Manatees and Dugongs, characterised by a long cylindrical body, flipper-like fore limbs and by the absence of hind limbs. There are no absence of hind limbs. There are no ears, and the eyes are very small. They feed entirely on aquatic vegetation and occur both on the coast of Africa and America. The Ungulata includes all the boofed M., and forms a large order, comprising such

a large order, comprising such diverse forms as the horse, elephant, and the cow. The toes vary from one to five in number, and never bear claws, but are usually provided with hoofs. The Rodentia are the gnawlog M., and include a large number of some of the smallest forms, such as mico and rats, hares, rabbits, and many S. American animals. Their incisor teeth are large and sharp, and consist usually of a pair in both jaws. They are kept sharp by the back surfaco, which has no enamei coat, wearing away faster than the front. They are mostly herbivorous, and some aro praetically omnivorous, and are scrious enemies of man. The Carnivora includes many of the most magnificent M. Though mainly flesh eating, the members of this order are sified, for

tata, (2) Sirenia, (3) (4) Cetacea, (5) Rodentia, interest into filippers for Cetacea, (5) Primates. In Edentata and being converted into filippers for Cetacea, the teeth tend to be supterestrial life, or pinniped, the limbs pressed, but in the other orders they being converted into filippers for the contract tent tentures and of creat legicial life. The fisheds are being converted into imprers for terrestrial life, or pinniped, the limbs being converted into flippers for aquatio life. The fissipeds are divided into eat, dog, and bear sections. The Insectivora, or insect eaters, are placed high in the classification of M. on account of their relationship to lemurs, but their brain arbibits a rather low organisation. exhibits a rather low organisation, and they probably had a common origin with marsupials. The mole and the hodgehog are familiar examples of this order, which is unrepresented in S. America and Australasia. The Chiroptera or bats are specialised Insectivora, differing from them Insectivora, differing from essentially in powers of flight. are widely distributed over the surbroad fold of skin ou each side of the globe, but abound chiefly for a limited time. The bat's wings are composed of a thin flexible habit, and though the brain is not leathery membrane stretched belieathery membrane stretched belieathery membrane stretched belieghly developed, the senses are all tween the bones of the fore and hind exceptionally acute. The Primates, or highest M., are divided into two in Edmonson co., Kentucky, U.S.A., sub-orders: the Lemuroidea, or hetween Nashvillo and Louisville, lemurs, and the Anthropoidea, which discovered in 1809. It is 6 m. from

lemurs, and the Anthropoidea, which include all monkeys, apes, and man. Mammary Gland, the organ which secretes the nilk with which mamnals feed their young. The female hreast in the human extends hotween the second and sixth ribs. It is composed second and sixth ribs. It is composed of several lobules, each of which has a lactiferous duct leading to the nipple. The nipple is surrounded by a circular patch called the areola, which is ordinarily pigmented. The pignontation deepens to dark brown during pregnancy and lactation. The size of the M. G. increases from the age of puberty and reaches its greatest size towards the end of pregnancy and

size towards the end of pregnancy and during lactation. In later life the breasts are apt to become pendulous. Mammea, or Americana, a large tropical tree (order Guttiferæ). Its showy flowers are distilled by the inhabitants of tropical America to produce Eau de Creole, a strong per-fumed liqueur, and the huge, doublerind, hitter fruits known as Mammey

are eaten.

Mammillaria, a large genus succulents (order Cactaceæ), with fleshy, leafless stems, rarely higher than 12 in, and often only a few flattened. inches, and round and or cylindrical, or hranching from the Arranged in various designs the surface are tubercles or nipples, which hear spines in tufts, rosettes, or stars. The flowers spring from the axils of the upper tubereles, and though small and fugitive are showy and are followed by finely tinted berry-like fruits. A dry, warm, greenhouse suits most Ms.

Mammola, a com. and tn. of Reggio, Italy, 7 m. from Gerace. Pop. 8500.

Mammoth, the best known of the extiact elephants. Since 1799 many perfectly preserved specimens have been found, principally in the N. of Siberia. It was of great size, and differed mainly from the living memhers of the order Proboscidea by the thick, hairy covering, and the tusks, some 8 ft. long, curved up-wards, jawards towards the head, and out sideways in somewhat spiral fashion. The remains of the M. have been found ia enormous number, not Pop. about 575,000. only in the neighbourhood Arctic Sea, but throughout

and N. America as far S. as t of Mexico. Examination of m mains shows that the princip

Cave City, and connected by steamers Green R., Indiana. with diameter of the whole cavern's area is 9 to 10 m., the total length (including all passages and avenues) is cluding all passages and avenues) is estimated at 150 m. In some of the grottoes there are hranches of the subterranean R. Eeho. Mammoth Dome is 540 ft. loag, by 200 ft. wide, by 120 ft. high. Blind fishes, crickets, crustacca, and insects havo been found in the caves. Bats abound in the outer galleries. The temperature ranges from 52° to 59° F. See Ward, Plan and Description of the Cave in Kentweits 1816. Packard and Dat. Kentucky, 1816; Packard and Put-nam, The Mammoth Cave and its Inhabitants, 1879; Hovey, Celebrated American Caverns, 1882.

Mammoth Hot Springs, a group of thermal springs in the N. of Yellow-stone National Park, Wyoming, U.S.A. about 1000 acres in area. They are remarkable for their snowwhite calcareous deposits. waters are turquoise-blue in colour, the temperatures varying from 60° to 175° F. They are unrivalled since the terraced springs of Rotomahana (New

Zealand) were destroyed.

Mamoa, Upper and Lower, two villages of Voronetz gov., Russia, on the Don. There is trade in corn.

Pop. 11,000.

Mamore, a riv. of S. America, forming part of the boundary between Bolivia and Brazil, sometimes re-garded as the main headwater of the Madeira. It is formed by streams rising in the Cochabamba Mts., and is called Rio Grande in part of its course.

Mamun, or Al-Mamun (786-833). the surname of Ahdallah, second son of Harun al-Rashid, and seventh Ahbasido calif of Bardad (\$13-33), defeating and succeeding his brother Amin. He was a patron of literature. See Weil, Gesch. der Chalifen, li., 7: Ahoolfeda, Annales Moslemici.

Mamurat-el-Aziz, Mamuret-ül-Aziz, or Kharput, a vilayet of Asiatic Turkey, mainly included in Kurdistan 60 m. from Diarbckir. The College of Armenia is hero. Capital Mezereli

ig, is a highest order la ups, the apes.

was young shoots of the fir and pine, monkeys, and baboons, and the and it was probably some over- Prosimic, or lemurs. As far as mere whelmiag cataclysm which ulti-nately exterminated them rather be considered as related to monkeys than inability to fiad oaough food. and apes; in commoa with those Mammoth Cave, a great cavern animals he possesses five fingers and formed hy a series of vast chambers five toes, armed with flat nalls to-

wards the extremitios, has a similar lable part in determining the intellecarray of tooth, which are normally preceded by milk-toeth, has a simple stomach, and lives mainly on a vegetarian diet. The young are brought forth usually one at a time, and aro quite helpless at the time of birth. Towards the latter half of the 19th century a strenuous controversy arose as to M.'s place in the animal world, but it is now generally conceeded that, as far as physical characteristles are concerned, there is no reason to suppose that M. is other than a form of development with characteristics sufficiently in common with monkeys, apes, otc., to justify his being placed in the same order of nis being placed in the same order of mammals. M. does not differ from those animals in possessing structures fundamentally different, but only in possessing them either in a more rudimentary form or in a more developed form. Some of the ways in which M.'s physical organism diffors from that of the rest of the primates, may now be pointed cut. The lower limbs are jour, and the upper limbs. limbs are iong, and the upper limbs short in M. as compared with the apes. He maintains an ereot posturo, stands flat upon the soles of his fect, instead of on the outer edges as most apes do. by

set so as to normally look ahead when the individual is in an oreet posturo. His skull shows a marked divorsity of

are regular; although the different forms are distinct on examination, they make an even series without any break and without any individual teeth projecting markedly bo-yond the rest. The body is for the most part devoid of hair, but in the beard and head, hair may attain a length which is peculiar to the human genus. The thumb is long and opposes itself easily to any of the other fingers; on the other hand, the big toe is not opposable at all, and the foot has little power of prehensile movement. Probably the most important differenco between M. and other members of the same or any ordor, is the higher physical development of the brain. Not only is the size greater in pro-portion to the rest of the body, but it portion to the rest of the body, presents a more elaborate series of folde or convolutions. When it is folds, or convolutions. understood that the physical pro-cesses corresponding to the highest mental activities are located in the cortex, or rind of the brain, it is seen that the extent and number of the convolutions, by increasing the area of the cortex, must play a consider-

tual effectivoness of the animal.

It appoars, therefore, that the differences between M. and his noarest kin In the animal world are diffcrences of degroo, rather than of kind. It is difficult to point to any one charactoristic which can be looked upon as an adequate cause for M.'s superiority over other animals. The truth prob-ably is that many eaues have con-tributed to that superiority. Among them, in addition to mere size of brain, may be quoted the adaptability of his hands to many uses, allowing a degree of manipulation impossible to other animals, the more exquisite óŧ differentiation sense-perception than is apparent in most animals, the voice capable of many various sounds and so lending itself to the formation of a language. When differences other than physical are considered, the superiority of M. is so great as to incline some to the opinion that M. Is a separate creation on the ground of his montality alone. However great this superiority is, it does not appear that M. possesses any faculty or fairly fundamental montal process which is not possessed in some degree some lower animal or other.

the powers of abstraction, easoning are demonstrably by cortain animals, if only

nentary form. Present day opinion strongly inclines to the theory that the processes of evolution as ordinarily understood are quite sufficient to account for the marked superiority of a single species. This does not necessarily exclude any idea of acts of graco from a higher power or of 'spiritual influxes,' but it maintains that the lower animals are also susceptible to such acts of grace,

though perhaps in a less degree.

Origin of man.—The ultimate origin of M. Is a problem bound up ultimate with that of the origin of organic life as a whole, as the concoption of a suddon creation of separate and per-manent species has long been aban-doned. It has, however, been the aim of many anthropologists to arrive at a form of animal which may roasonably be supposed to represent the common ancestor of M. and his nearest relatives in tho auimal world. At various times human or semihuman romains have been discovered which boar an ape-like appoarance. Among them may be mentioned the Neanderthal skull found near Düssoldorf and the skull from Spy in Belgium. Both arc preserved in the Oxford University Museum, and both exhibit an ape-like conformation of the forehead. Another skull found In 1891 in Java in a Pliocene formation, bore certain resemblances to a simian

skull, and is considered by some to land and Ircland (hence its name). The whole question of the antiquity of M. is a matter of conjecture, he may have been in existence in Pliocene times, but in Europe, at any rate, he did not make his appearance

until the Quaternary period.

Future of man.—It is sometimes maintained that M. has now arrived at a fairly permanent physical form. but it is difficult to reconcile the idea

take a greater and greater part in the establishment of his own environment, and may in a sense determine his own evolution. It may be said that there are two tendencies perceptible as to the manner in which a different type may be reached: one is the tendency to differentiation of individuals and races, the other is the tendency to the movement of mankind as a whole. The first tendency can be seen in such conceptions as a 'chosen race,' the authority of conscious superiority as in the 'superman,' with its corollary of subject individuals or subject races, and the like. On the other hand, we have the conception of solidarity implied in the idea of a 'common humanity' with the widest possible notion of social obligations. Still more speculative than the probable results of human endeavour for M.'s uplifting are the problems of M.'s possible enemies and conquerors in the evolutionary struggle. Some writers see in the organisation and adaptability of some sections of the insect world the rudiments of a development which will surpass and conquer human development. Others see in the great diver-sity of animal forms below us which have no consciousness of our exist-ence, the possibility of a corresponding diversity of animal forms above us with which we have not yet come into contact or, consequently, conflict. Of more practical import are the efforts of bodies of men like the modern 'eugenists,' who seek to improve the race in aircctions which will meet with the common approval. Their efforts are as yet restricted to the prevention of the propagation of tendencies which we know to be harmful to the physical well-being of man-Further than that, our ignorance of our common destiny makes it impossible to advance. See Huxley, Man's Place in Nature; Darwin, Descent of Man; A. H. Keano, Man, Past and Present.

Man, Isle of (ancient Monapia, or Menavia; Manx Vannin, or Mannin, middle), a small island in the Irish Sea, almost equidistant from Eng-

represent an animal between M. and about 16 m. from Burrow Head, Scotland. Its area is about 227 sq. m., and it belongs to Great Britain. A cable (32 m. long) runs between Pt. of Ayre and St. Bees. A tiny islet known as the Calf of Man is in the S.W. mountain range stretches from N.E. to S.W. through the island, culminating near the centre in Snaefell (c. 2030 ft.). The climate is very equable, W. and S.W. winds predominating, while fuchsias, myrtles, and other exotles flourish all the year round. Lead, copper, iron, and zinc are found, but no coal. The Laxey lead-nines yield quantities of silver. The island's small breed of horses are noted, and its tailless cats. There are herring, mackerel, and other fisheries. Granite, marble, limestone, and greenstone are quarried. The island is a favourite holiday resort, and has steamboat services to Liverpool, Barrow, Silloth, and other ports. The chief towns are Douglas (capital), Castletown, Pcel, Ramsay. The inhabitants are Manx (Menavire) of Celtio race. From the 6th to the 9th century they had Welsh kings. These were followed by a Scandinavian dynasty, who in turn yielded their rights to Alexander III. of Scotland (1266). In 1406 the island was granted to the Stanleys (Earle of Berbyl, and was purchased by the British Government after long negotiations (1765-1829) from the Dukes of Athol, who held it from 1735. The island forms the bishopric of Sodor and Man. It has its own lleutenantand Man. It has its own lieutenant-governor, council, and House of Keys Pop. (1911) 52,034. Seo History of Man by Cumming, 1848, Train, 1845, Moore, 1900; Walpole, The Land of Home Rule, 1893; Manx Society's Publications (32 vols., from 1858); Herbert and Maxwell, The Isle of Man, 1909.

Manaar, or Manar, Gulf of, an arm of the Indian Ocean hetween Ceylon and S. India, separated from Palk Strait by the islands of Rameswaram and Manaar, and a roof, Adam's Bridge. It is about 150 m. wide at the entrance, and has pearl fisherles. Manaar Is. is situated W. of N. Ceylon, at the gulf's head, and is 18 m. long hy 21 m. broad. The town's

pop. is about 3000. Manabi, a maritimo prov. of Ecuador, S. America, between Esmeraldas and Guayas. Sugar and cacao are produced. Puerto Vicio (c. 80 m. from Guayaquil) is its capitul, on a small river flowing loto the Pacific. Pop. 65,000.

Manacle Rocks or Point, a dangerous reef off the S.E. coast of Cornwall, England, by St. Keverne, 7 m. S. of Falmouth.

Manacor, a tn. of Majorca, Balcaric

Tipitapa, S.E. into Lake Nicaragua, separated by volcanic hills from the Pacific. Lake M. or Leon has the volcano, Momotombo, on its N.W. volcano, Momotombo, on its N.W. shore. Several steamers ply on the lake. 2. A dopt. of S.W. Nicaragua, bounded S.W. by the Pacific, N. by Lake M. Much coffee is exported. 3. Cap. of above and of Nicaragua (since 1851), connected by rail with Granada, S. of Lake M. Pop. 35,000.

Manakins (Pipridæ), a family of Mesomyodi or songless birds of small size, occurring in forest districts in the northern part of S. America. Like the closely allied tyrants, M. feed largely on insects, but also eat

fruit and seeds.

Manameh, a tn. and the commercial cap. of the Bahrcin Is., Persian Guif.

Pop. 25,000.

Manaos, the cap. of the state of Amazonas, Brazil, situated on the Rio Negro about 10 m. from its junction with the Amazon R. Its chief exports are india-rubber, Brazil nuts,

and fish. Pop. 50,000.

Manapla, a tn. in the prov. of Negros Occidental, Is. of Negros, Philippine Is., situated in the extreme N. of the province. Pop. 10,000.

Manar, see MANAAR.

Manasarowar, or Tso-Mapham, a lake of Tibet, situated at the base of Mt. Kailas, about 15,000 ft. above the level of the sea. In Hindu legends it is a sacred lake, and is an

object of pilgrimage both for Tartars and Hindus. Area 150 sq. m. Manassas, a tn. and the cap. of Prince William co., Virginia, U.S.A., 30 m. W.S.W. of Washington, D.C. It was the scene of the two battles known as the battles of the Bull Run, fought in 1861 and 1862 during the Civil War.

Manasseh, the eldest son of Joseph, horn in Egypt. His descendants formed a tribe who received lands on hoth sides of the Jordan. M. was deprived of the precedence due to him by reason of priority of hirth by Ephraim, on whose head their grandfather, Jacob, placed his right hand in

Is., Spain, 30 m. E. of Palma, 10 m., Christians referred to him. His from the port of Arta, where there are greatest work, which took twenty-nine noted stalactite caverns. It is a years to write, was an effort to rehishop's see, and contains an ancient palace. Wine is produced. Pop. 12,500. biblical passages. For an abridge-Managua: 1. A lake of Nicaragua, Ment of his writings see Basnage, Central America, drained by the History of the Jews.

Tinitans S E into Lake Nicaragua, Manague (Managus) a marine

Manatee (Manatus), a marine mammal of the order Sircnia, which, though of ungainly appearance, is probably the origin of the Mermaid superstition. It ranges along the W. coast of Africa and the E. coast of tropical America, and ascends the rivers, where it browses on the aquatic vegetation. Ms. are slow and in-offensive, but for their valuable oil and their skin and flesh they are hunted, and their numbers are rapidly diminishing. They are from 8 to 12 ft. long; their skin is like an elephant's, and the long body ends in a tail like a beaver's. The forepaw or flipper has small flat nails, and its resemblance to the human hand is supposed to have given the M. its name. The upper lip is eleft, and the parts diverge and clasp the food in eating.

Manbhum, a dist. of W. Bengal, British Indla, Bardwan div., forming the E. of Chota Nagpur. Its capital is Purulia, and it contains the Jharia coal-field (N.). Rice, cereals, and

tobacco are produced. Area about tobacco are produced. Area about 4147 sq. m. Pop. 1,300,000.

Manby, George William (1765-1854), inventor of life-saving appliauces in cases of shipwreck, born at Hilgay, Norfolk. Entered the army and later attained the rank of captain. In 1783 he caused a line to be thrown from a small mortar over Downham Church; this convinced him, and he found an opportunity for proving its utility in 1808, when a brig was wrecked at Yarmouth and all lives were saved.

Mancha, La, an old dist. of Spain. in the S. of New Castile, now comprised in the provs. of Ciudad Real and Albacete. It is noted for mules, and for Val-de-Penas, a light red wine. Cervantes' characters, Don Quixotc and Sancho Panza, have made the

district famous.

Mancha-Real, a tn. of Jäen prov., Andalusia, Spain. Pop. (dist.) c. 6000. Manche, a maritime dept. of N.W. France on the English Channel (La Manche), formed (1790; from the old province of Normandy. It consists in part of the peninsula of Cotentin, terminating N.W. in Cape la Hague. father, Jaoob, placed his right hand in blessing instead of his left, M. thus blessing instead of his left, M. thus taking the second place.

Manasseh (Ben Joseph Ben Israel) (1604-59), a learned Jewish writer, born in Lisbon; at eighteen he was rabbi at Amsterdam. Deprived of his property by the Portuguese Inquisition, he commenced to publish hooks. His knowledge of the Scriphology, around the Tombelaine and houts was so great that even eminent

Manchester, a city, municipal, co., and parl. bor. of Lancashire, England, 189 m. N.W. by N. of London. M. may be said to have grown up with the cotton industry, of which it is the centre. It is a modern town, and eovers an area of 21,645 aercs. Four rivers pass through the citythe Irwell, Medlock, Irk, and Tib, the latter being continuously built over, and the Manchester Ship Canal (q.v.) connects it with the Mersey, and so makes it a great British scaport. town of M. proper is not very large. and the buildings are mainly of brick; the principal thoroughfare is Market Street, which is also one of the narrowest, most of the others having been widened from time to time. Deansgate in particular having been greatly improved. The greater part of the population live outside the city to avoid the smoke and dirt. numerous parks and open spaces, is one large urban district. M. has been the seat of a bishopric since 1847, James Prince Lee (d. 1869) being the first bishop. The eathedral is a disappointment, being nothing more than a parish oburch. It is a good than a parish oburch. It is a good specimen of the Perpendicular, the principal part dating from the 15th century. It has been frequently restored. There are one or two fine windows, one to the memory of General Charles Gordon, and some interesting old carved choir-stalls. The other churches are not of any particular interest. There are several Jewish synagogues, and an unusually larro Quaker meeting-house. largo Quaker meeting-house. most interesting of the old buildings is the Chetham Library. M. possesses some of the finest public buildings in the country, the town hall (1877), designed by Alfred Waterhouse, being au especially magnificent building. It is, however, too small for the everincreasing municipal activities of the town, and a scheme for a new scries of buildings awaits final adoption. The present hall is decorated with panels by Ford Madox Brown; it also contains a very fine organ. Other fine buildings are the Art Gallery, designed by Sir Charles Barry and containing an excellent collection of modern paintings; the Royal Infirmary (1909); the Royal Exchange (1869), which is one of the largest halls in the kingdom; the assize courts (1864), designed by Alfred Waterhouse, a fine specimen of decontains a very fine organ. Other Waterhouse, a fine specimen of de-corative art; tho Free Trade Hall, and the Athenenm. The Whitworth Institute lies in the centre of a park.

eoast. Area about 2475 sq. m. Pop. It was founded by Sir Joseph Whit-487,400. Worth and contains valuable art collections. There are numerous statues and monuments in the city. M. is well provided with means of education. It possesses an ancient grammar school founded by Hugh Oldham, Bishop of Exeter, in 1519, also a blue coat school, founded by Humphrey Chetham in 1653, which possesses a fine library containing many rare volumes, besides many other institutions. The college founded by John Owens in 1846 has now developed into the Victoria University. It received its charter in 1880, and was then incorporated with the colleges of Liverpool (q.v.) and Lecds (q.v.), which were separated in 1903. The buildings designed by Waterhouse include the Whitworth Hall, the Manchester Museum, and the Christie Library, containing a very fine collection of volumes. Besides the libraries already mentloned, Trams and railways link up the there are the Manchester Free various suburbs and towns, and the Libraries (1852), with an excellent wbole neighbourhood, but for the reference library to which several special collections have been pre-sented. The John Rylands Library contains the great Althorp Library and a splendid collection of early printed books. Literary and scientific associations of all kinds flourish. The Manchester Guardian (q.v.) is perhaps Manchester Guardian (q.v.) is pernaps the leading Liberal daily newspaper in the country. The city possesses no less than nine fine parks and more than thirty smaller open spaces. Heaton Park, containing Heaton House, at one time belonging to the earls of Wilton, is the largest; there are also Queen's Park, Alexandra Park, and the Bellevue Zoolgical Gardens with a good collection of Gardens with a good collection of animals. Of the theatres, the principal are the Theatre Royal, Princes Theatre, and Queen's Theatre. Miss Horniman's repertory company 'at the 'Galety' Theatre has been the school for a successful number of new dramatic authors. The concerts, first established by Sir Charles Hallé, have made M. an important musical eentre. A municipal charter was granted to the town in 1838, it became a city in 1853, and a county borough in 1889. It is divided into thirty wards, and the corporation is composed of thirty-one alderments. and ninety-three councillors. The city rateamountstoover£1,000,000 a year. They have had a lord mayor since The municipal water supply 1893. comes from Longendale and Lake Thirlmcre, and tho city is well lighted with both gas and electricity. There is an excellent service of electric trams of over 160 m. of track, owned by the Corporation since 1901. Communication is good, there are four

largo railway stations—Loudon Road, | Viotoria, Central, and Exchange-Violoria, central, and Exchange—the lines being the Lancashire and Yorkshire, London and North-Western, the Midland, Cheshire lines, Great Northern, and Great Central railways. The city returns six mem-

bers to parliament. Trade and commerce.—M. is regarded as the centre of the cotton trade and has earned the name of 'Cottonopolis,' but it must be remembered that the spinning and weaving is almost entirely earried on in the many towns of Lancashire, and the city is the distributing centre of cotton goods for the whole world. It has thus for long attracted a large number of foreign merchants, especially Germans. Apart from this mer-cantile side M. has large and very miscellaneous industrics. The machinery and engineering works are numerous. It is also one of the largest centres of hat making, while clothing, india-rubber goods, chemical works, etc., are among its special activities. M. is also the distributing centre for the food supply of one of the densest populations in the world. The Mancliester Chamber of Commerce dates

from 1797 and is one of the oldest in

the country.

That M. was at one time occupied by the Romans is evident by the coins, pottery, etc., found there; it is also supposed to have been tho bome of Ina, King of Wessex (639). M. is mentioned in Domesday; it received a charter in 1301, tho manorial rights passing from the Greslys to the De la Wester Weste Lagre and Meeters. passing from the Grestys to the DC in Wares, Wests, Lacys, and Mosleys successively, until 1845, when they became vested in the municipality. The city carly became a flourishing manufacturing centre. Camdon, who died in 1623, says: "Where the Irk runs into the Irwell, on the left-hand bank, and scarce three miles from the Mcrsey, stands that ancient town called in Antoninus (according to different copies), Mancunium and Manutium, Perhaps, as an inland town, it has the best trade of any in these northern parts. The fustian manufacture, Manchester called cottons, still continues there.' During the Civil War it was besieged by the Royalists, but later we find it occupied by Prince Charles Edward (1745), and the M. regiment being raised to defend the Stuarts. In 1819 M. was the scene of what was known as the Peterloo Massacre, which started the Reform agitation. The crowd having net at St. Peter's Fields, where the Free Trade Hall now stands, to

in politics, and has been markedly Liberal and progressive in its sympathies, especially in regard to Free Trade, its economic position giving riso to the name 'Manchester school' riso to the name management school for the extrome laissez-faire school. Pop. (1910) 714,333. See John Reilly, History of Manchester, 1861; W. A. Shaw, Manchester Old and New, 1894;

Snaw, Manchester Old and New, 1894;
T. Swindells, Manchester Streets and
Manchester Men, 1906-7 (3 vols.).
Manchester, a tn. in Hillsborough
co., state of New Hampsbire, N.
America, situated on the left bank of
the Merrimac R., 18 m. S.S.E. of
Concord, and 59 m. N.W. from
Boston. The town is built on a plain
at the height of 90 ft shows the river at the height of 90 ft. above the river, and is regularly laid out. The principal street is wide, and is upwards of a pat street is wide, and is upwards of a mile in length, parallel to the river. There are four public squares in different parts of the town, some of which are handsomely ornamented. The bouses are mostly of brick, but there are many wooden houses, some of which are tasteful structures. The slope from the plateau on which the town stands to the river is occupied by the mills and houses of the work-men. M. possesses twelve churches belonging to different denominations; and the educational establishments consist of a high school, two grammar schools, besides others of an inferior class. M. has risen into importance quite recently by reason of the water power, which affords great advan-tages to the manufactories here. Not far from the town the river has a fall of 54 ft. in a mile, which is taken of 54 ft. in a mile, which is taken advantage of by means of dams and canals, so that it turns many thousand spindles. The town is chiefly remarkable for its manufactures. There are also at M. print-works, paper-mills, machine-shops, foundries, and other establishments. In the year 1820 this place only contained year 1839 this place only contained fifty inhabitants, but it has rapidly increased since that time. M. received its charter in 1846. Pop. (1910) 70,063, showing a 29'1 per cent. increase in the last twenty years.

Manchester, Edward Montagu,

Manchester, Edward Montagu, second Earl of (1602-71), an English general and statesman. Created Baron Montagu of Kimbolton in 1626 and succeeded to his father's title in 1642. Both in the Short and Long Parliaments he identified himself with the popular and puritan cause against the king. Accused with the 'five members' of high treason but exonerated by a bill passed in both houses. After the outbreak of civil war, M. raised money in London for the realisment of the realisment petition parliament, the yeomanry the parliamentary forces, and in Aug. were called out, and many people 1643 he was put in command in place were killed and injured. Since then of Essex. Took Lynn Regis and Lin-M. has always taken an active part of Cromwell.

Manchester Guardian, a penny daily. established 1821. Began as a weekly paper. One of the foremost and most polished Liheral organs of the day. Long before the early eightics its advertisements could truthfully boast a circulation not only throughout the cotton and woollen manufacturing districts, but in nearly every market town and village in the N. of England. As long ago as the early sevonties its profits were estimated at £30,000 a year; it possessed a foreign service, a staff of special and ordinary correspondents, a corps of parliamentarreporters, and was characterised by generally distinguished tone whic made it the equal, if not in somo 1911 the tonnage of vessels entering respects the superior, of the leading London dailies of that time. credited with often having published news during, and for a decade after, the Franco-German War some time in advance of the Times and the Standard. Early in its history its columns were notable for the anticorn law articles of Cobden. It has always preserved a strictly neutral attitude in regard to religious matters.

Manchester Ship Canal. This canal was opened by Queen Vletoria in May 1894. Up to that time there had been barge navigation between Llverpool and Manchester along the rivers Mersey and Irwell, and the Bridgowater Canal was extended to Runeorn water Canal was extended to Runcorn in 1722. The first plan for a direct waterway between the two cities was made in 1825 by W. Chapman, and in 1840 another was designed by H. Palmer, but it was not until 1882 that a Bill was brought before partiament in which the design of Sir E. Leaden Williams for canal with bed. Leader Williams for a canal with locks was adopted. Owing to opposition the Bill did not pass until 1885, and it was not until two years later that work was begun. The length of the canal is 351 m.; it hegins at Eastham on the Cheshire side of the Mersey and runs to Runcorn near or through the Mersey estuary, It then goes inland to Latchford, near Warrington, where tidal action ceases, and from there to Manchester it is fed by the waters of the Mersey and Irwell. There are three entrance locks which keep the water level nearly to mean bigh-water level. The original depth of the canal was 26 ft., but it has since been made 2 ft. deoper. At the narrowest part it is 120 ft. wide, so that it is possible for large vessels to pass one The canal is a splendid engineering feat. At Barton the Bridge-

Newbury (second), but owing to his laqueduct is made of steel and worked general lethargy was retired in favour by hydraulic power. The canal is crossed by five lines of railways, carried by high-level viaducts. There are also nine swing bridges for main roads, while underneath the canal great syphons are constructed to enable the R. Gowy to continuo its courso uninterrupted. At intervals along the whole length of the canal there are wharves and works of all kinds, as at Runeorn and Weston Point, and at Manchester the docks cover an area of over 100 acres (water space), with over 6 m. of quay walls and 290 acres of wharf space. The immense advantage it has been to hiro and the more than

outlay. In Manchester was 1,329,679, and that

of those clearing 1,095,478. Manchineel, or Hippomane mancinella, a tali tree with glossy, ovate leaves, and small, inconspleuous flowers which are followed by a yellowish green, apple-like fruit (order Euphorhiaeeæ). All parts of the tree are very acrld and polsonous.

are very acrid and polsonous.
Manchuria, a country in the E. of
Asla, lying between China and Mongolia on the W. and N.W., and Korca
and Russlan territory on the E. and
N. The R. Amur forms the houndary
on the N. It is divided into three
provinces, Northern M., or Kirln; and
Southern M., or Sheng-king. The
northern and eastern part of the
country is very mountainous, the remander being a plain which stretches mainder heing a plain which stretches to the Gulf of Liao-tung. The mountains S.E. of Kirin riso to a height of 8000 ft., the western ranges are chiefly volcanlo. The principal rivers useri, they are all navigable by native junks, and the eity of Klrin on the Sungari can be reached by steamer. Mukden is the capital of M., situated in the province of Sheng-king and occupying a good position on tho R. Hun ho. It is a city of considerable size and importance (pop. able sizo and importance (pop. 150,000). Kirin is the principal city of the province of Kirin, and Hel-lungkiang of the province of Hellung-kiang. The chief commercial town and port is Ninchwang, at the head of the Gulf of Liao-tung. The country is well curvised with well they. is well supplied with rallways, principal run from Poking to Kirin riâ Mukden, and the next ln Importance from Ninchwang to Petuna in the N.W. of Kirin. The mineral wealth, hut partly explored, is great. coal and iron mines are extensively water Canal crosses the R. Irwell on worked and the yield of precious a swing-aqueduct, the first of the stones is valuable. Opium and likind constructed in England. This digo are largely grown, also cotton, worked and the yield of preelous stones is valuable. Opium and inboars, wolves, tigers, and pantbers abound. The river fisheries aro valuable. The country was originally inhabited by the Manchus, and tho first appearance of these people in Russia, and the latt evacuate the province. their part of the agreer

declared between Russia and Japan, the result being that at the conclusion of peace (1905) Japan handed over M. to Cbina, Russia and Japan both having special interests in M., it was necessary that an understanding should be arranged with regard to the releminations; also, British and damus from the High Court is in call-transport of the present the state of the presen their delimitations; also, British and other foreign interests had to be guarded in accordance with the principle of the opon door for British and foreign commerce being uninterfered with. A definite agreement delimiting spheres of influence and preserving the open door was signed in 1912 between Russia and Japan. Area about 390,000 sq. m. Pop. 16,000,000.

Mancini, Pasquale Stanislav (1817-88), a lawyer and statesman, born near Ariano. He soon became a prominent publicist, and in 1848 par-ticipated in the Neapolitan move-ments, after which he retired to Turin and practised as an advocate, being appointed professor of inter-national law at the university there. Instruction for a short period. From 1881-83 he was Minister of Foreign Affairs. He published *Prelezioni di* Affairs. He published Diritto Internazionale.

Mancinus, C. Hostilius, consul, 137 B.C., was defeated by the Numan-tines, and purchased his safety by making a peace with them. The senate refused to recognise it, and delivered him over to the enemy, who refused to accept him.

wheat, barley, tobacco, and millet. The tall millet forms a large part of the peasants' food. Potatoes and Koran. Their religious books are: cabbages grow well, and many hardy sidra rabba (Great Book), Sidra fruits. The climate is very extreme, ranging from 90° F. in summer to 10° Hymns concerning baptism and the below zero in winter. The wild ascension of the soul after death), animals are numerous, bears, wild boars, wolves, tigers, and panthers abound. The river fisheries are Know-

Upper above China dates from the beginning of the 10th century. For their relations with China see China. During the Boxer outbreak (1900) the Russians occupied the country. A convention was arranged (1902) between China and (Fort Dufferin). There are many constaring and the latt onasteries. ctensively.

185.000.

ing upon justices of the pcace to show cause why they should not exercise their jurisdiction in a particular case, their initiation in a particular case, and, generally speaking, the object of the writ is to enforce the performance of some duty or to test the legality of the performance by the inferior court of some duty of a public nature in respect of which there exists no other weight, and descript the card mercel. available and adequate legal remedy. But in theory it is a royal command which may be directed to any person, corporation, or inferior court (q.v.) within the king's dominions, requiring them to do something appertaining to their office and duty in accord-ance with right and justice. Illustrations of its application: M. to a mayor and corporation to counsel them to In 1861 he became Minister of Public receive and count votes; to poor law guardians to compel them to appoint a vaccination officer; to justices at Browster Sessions to compel them to hear and determine applications for renewals of licences.

Mandarin, the general name for a Chinese magistrate, or public official, civil or military. The civil Ms., chosen from the men of letters or scholars from every part of the country, are divided into nine degrees, each consisting of two classes, the highest of which are (or were) ministers of state, counsellors of the emperer, and presirefused to accept him.

Mandaeans (Manda gnosis), an Eastern religious sect, now very few in numbers, residing on the castern shores of the Tigris, and having a religion derived from the N.T. but tainted with Jewish and Parsic clems of the supreme court. Each ments. They were called 'Christians of St. John 'because they venerated John the Baptist, while they call a sign of office or rank, but as a retbemselves 'Subbà 'or Baptists, and

日本の大田田田

the lowest of gilt metal.

Mandarin Duck, or Chinese Teal (Aix galericulata), a very small orna-mental waterfowl. The drake's head has a long, erectile crest, green, purple, and chestnut in colour, and a curious fan or sail. A duck and drake

are an extraordinarily devoted pair.
Mandarin Orange, a fruit with reddish rind and dark red pulp, borne
by Citrus nobilis, the Noble orange,
which according to Sir J. Hooker is a

variety of C. aurantium.
Mandate, in Scots law, a contract (founded directly on the Mandatum of Roman law) in which one person (the mandant) employs another (the mandatory) as his agent. Generally speaking, the services of the mandatary are implicilly gratuitous, for the execution of a mandatum in Roman law was essentially the discharge of office of friendship, and never really lost its character of a fiduciary relationship. It is of but little importance in Scots law at the present day, and really forms no more than one, and that a very unusual branch, of the ordinary contract of principal and agent. The maudatory, where he becomes a gratuitous bailee of the mandant's property, is liable only for gross negligence; if paid, the ordinary principles as to the liability of a paid agent apply.

Mandevilla, a genus of tall climbing shrubs, natives of Central America, of the order Apocynacee. Many species bear large, showy funnelshaped flowers in simple racemes; but M. suavolens is the only species much grown. It requires stovehouse treatment, and produces handsome snow-white fragrant blooms.

Mandeville, Bernard de (1670-1733), an English philosopher and satirist, born at Dordrecht, where his father was a physician. He was educated at the Erasmus School, Rotterdam, and at the Leyden University. In 1691 he took his medical degree and came to England, but did not practiso widely. His fame rests on his Fable of the Rees or Private Vices Public Reservations. the Bees, or Private Vices Public Bene-fits, which appeared first in 1705, and later editions in 1714 and 1723. was primarily written as a political satire on the state of England in 1705, when Marlborough's ministry accused by the Torics of advocating the French War for personal reasons. He also wrote Free Thoughts on Religion, The Origin of Honour, The Planter's Charity, etc. Sec J. M.

ngion, The Origin of Honour, The Planter's Charity, etc. Sec J. M. Robertson, Pioneer Humanists, 1907. Mandeville, Sir John, was tho ostensible author only of a book of travels bearing his name, written about the middle of the 14th century,

of the higher orders are made of giving an account of journeys in the coloured coral, the lower of glass, and East, including India and the Holy the lower of giving an account of give made. Land. It appears to have been com-piled from the writings of William of Boldensele, Oderic of Pordenene, and Vincent de Beauvais. The name of M. was probably fictitious.

Mandi, a small native state of the Punjab (N.E.), India, on the S. slope of the Himalayas. The town is on the Beas, 45 m. N.W. of Sinda. Pop. 8000. Area of the feudatory state 1200 sq. m. Pop. 175,00 Mandi State Gazetteer, 1908. Pop. 175,000.

Mandible (Lat. mandibulum, tho jaw), a name applied in anatomy and zoology to the jawbone. In birds it signifies both upper and lower jaws together with their horny integu-ment, although the terms maxilla and mandibula are sometimes used to refer respectively to the upper and lower parts. In mammals the term only applies to the under jaw. In insects it applies to the anterior,

upper, or outer pair of jaws.
Mandingoes, Mandingos, Mandingans, Mande-nga, or Mandiña, the names of an important division of Sudances of an important division of Sudances negro peoples of W. Africa, especially in Senegambia, between the headwaters of the Niger and the Senegal. Among the chief tribes and dialects are the Soni-nká, the Swaninki people of Azer and the S.W. Sabara, the Malinko, and the Bamana (incorrectly

tribes are th

and the Jah or nka means people). They are highly intelligent, were early leather and metal workers, traders, and herdsmen, and are marked by a pas-sionate love of music. The majority represent a mixture of negro, Bcrber, and Arab elements. The Mandi and Arab elements. speech is very widely diffused, and largely employed by translators. The empire of Melle (Alah) was founded by their ancestors under Musa (1311-31). They were conquered by the Sonrhal (Songhai) about 1500. They are zealous Mohammedans, estimated at zealous Mohammedans, estimated at over 10,000,000 in number. See Binger, Du Niger au Golfe de Guinée, 1892; Lugard, A Tropical Dependency, 1905; Johnston, Liberia, 1906; Marc, Le Pays Mossi, 1909.
Mandla, a dist. and tn. of the Central Provinces, British India. The town (capital) is on the Narbadá, 50 m. S.E. of Jabalpur. Arca (dist.) 5056 sq. m. Pop. (dist.) 320,000; (tn.) about 5500.

about 5500.

Mandogarh, or Mandu, a deserted town of Dhar state, Central India, stretching for 8 m. along the crest of the Vindhyas, 35 m. from Indore. It was the capital of the ancient Moham-medan kingdom of Malwa, and has ruins of a fine mosque of Pathan

Mandoline, a stringed musical in-strument of the lute family (treblo member), but with deeper convexity of back. It is of Italian origin, but is now common in most civilised lands. The two chief varieties are the Nea-politan (with four pairs of metallies strings), and the Milanese (with five pairs). It is played with a pleetrum or quill of tortoise shell, wbale-bone, or some pliable substance, held in the right band. The fingerhoard, or neck. has many frets across. Sec Grove.

Dict. of Music, vol. iii. Mandrake, or Mandragora, a small genus of permuna phases. Solanacea, of exceptional legendary interest. They are stemless plants, with thick tap roots and dark-green. cenus of perennial plants of the order wrinkled leaves. M. autumnalis hears pale purple flowers in September, and M. officinar white or blue flowers in May, followed by yellow, globose fruit. Both have been supposed to be the M. of Genesis, and the plants wero and still are credited with many

miraculous properties.

Mandrel, a cylindrical bar or spindle which is used for a variety of purposes in engineering: tho M. is often driven into a hole to afford a purchaso. The name is also used technically for specific parts of a machine, e.g. the M.

of a latho, etc.

Mandrill, a large W. African baboon with immenso canine teeth and other features in which it approaches the carnivora. Its large blood-red ischial callosities, and huge, naked, gaudilystriped cheeks, render it one of the most hideous creatures in nature. It ls insectivorous.

Mandsaur, or Mandesur, a tn. of Gwalior state, Central India, on a trib. of the Chambal, 106 m. N.W. of A treaty was signed here ending the Maratha-Pindari Indore. (1818) ending the marana. Pop. War. There is trade in opium. Pop.

Manduria, a tn. of Lecce prov., S. Italy, 22 m. S.E. of Taranto. Pliny describes its ancient well. Olives, fruit, grain, and wine are produced. Pop. fusco) 13,000. Pop. (with Uggiano Monte-

Mandvi: 1. A seaport of Cutch, India. on the Gulf of Cutch, 35 m. S.W. of Bhuj. Once an important commercial emporium, it is still a port of call for British India steamers, and has direct steamship communication with Bombay. Pop. about 25,000. 2. A tn. of Bombay, British India, on the Tapti, 30 m. from Surat. Pop. 5000.

Manerbio, a tn. of Brescia prov., Lombardy, N. Italy, on the Mella, 13 m. S.S.W. of Brescia. Pop. 5500. Manes, or Di Manes ('the good

architecture. See Campbell, Gazetteer gods '), in Roman mythology the dis-of Bombay (part ii., vol i.), 1896. embodied and immortal spirits of the dead, also applied somewhat indefinitely to the powers of the lower world. They were regarded as gods, and only propitiated with offerings, especially at certain festivals (Parentalia and Fernia). Cf. Larres and PENATES. See Ovid, Fasti, in PENATES. See Ovid, Fasti, ii. 535, 617, 642; Cicero, De Leg. ii. 9, 22; Wissowa, Religion und Kultus der Römer (1902).

Manfalut .

Manet, Edouard (1832-83), a French realistic genre and portrait painter, regarded as the founder of impressionism. He was sent on a voyage to Rio de Janciro (1818), but persisted in taking up an artist's career, and became a pupil of Couture and Courbet. He travelled widely in Europe, and deveted week that a publication and devoted much time to studying the Spanish masters in the Louvre. He became head of the Ecole des Batignolles (1863). His works were Dauguones (1863). His works were severely criticised and often rejected by the Salon. They include 'Buveur d'Abshtho' (c. 1860), 'Enfant à l'épée, 'Bon Bock' (1873), 'Olympia' (1865), 'The Garden' (1870), first of the plein gir paintings and noutrette the plein air paintings, and portraits of Zola, M. A. Broust, and Rochefort (1881). See

(1881). See (1867), Bazire Von Tschudi (1904); Geffrc . (1893).

Manetho, an Egyptian priest and historian. He lived during the reign of Ptolemy II. (Philadelphus), and was probably a native of Sobennytus in the Delta. His writings were the history and theology of ancient Egypt, his greatest work was the history of Egypt written in Greok. Only fragments have come down to us, saved by Yosenbus and the tables of saved by Josephus, and the tables of dynasties of the kings divided into three books. The Christian chrono-graphers have kept for us a great deal of his work, though many of them differ and are, therefore, untrustdiffer and are, therefore, untrust-worthy. Julius Africanus, Eusebius and Georgius Syncollus have all handed down quotations and references that are valuable. The fragments of M.'s work have formed the accepted foundation for the present seneme of the Egyptian dynasties with their allotted periods. See A. Wiedemann, Aemptische Geschichte. 1884.

Manettia, a genus of evergreeo climbing plants of the order Rubiacese, natives of tropical America. luteo-rubra bears scarlet, white, M.orange flowers from March to December, and is valuable for pillars in the

stovehouse.

Manfalut, a tn. of Upper Egypt, Africa, on the Nile, 20 m. N.W. of Assiut. It contains Coptic churches.

about 14.000.

Manfred (1231-66), King of Sicily and natural son of the Emperor Frederick II., on whose death he acted as regent in Italy, during the minority of his nephew, Conradin. In 1258, on a rumour of the death of the latter, he was proclaimed King of the Two Sicilies and crowned at Palcrmo. He was thereupon excommunicated by the popo, but marched into the papal territory and was acknowledged master of Tuscany. Later, however, Pope Urhan IV. re-excommunicated him, and bestowed his kingdom on Charles I. of Anjou, and finally he was defeated and killed at Benovento. M.'s government was beneficial to the country. He estah-lished schools in all the large cities, founded Manfredonia, and huilt the harhour of Salerno.

Manfredonia, a tn. of Foggia prov., Italy, on the Gulf of M., an inlet of the Adriatic, 22 m. N.E. of Foggia. It was founded by Manfred of Sicily (1263), 2 m. E. of the ancient Spontum. The Turks pillaged it (1620). Figs, almonds, and carobs are exported. There are salt lagoons

near. Pop. (com.) 12,000.

Mangaldan, a tn. of Pangasinan prev., Luzon, Philippine Is., near S. shore of the Gulf of Lingayen. It is connected hy with a hig high-road

galur, a scaport Madras, British India, cap. of S. Kanara dist., on the Malabar coast, 125 m. N.N.W. of Calleut. Coorg, coffee, and pepper are exported. It is the headquarters Lutheran) German (Basel mission, has a government college, and a Jesuit college of St. Aloysius (both connected with Madras Uni-Weaving, versity). sblpbuilding are among It hravely resisted

army (1782-83). Pop. 44,000.

Mangan, James (Clarence) (1803-49) an Irish poet. He wrote for the Nation (founded 1842), and contributed to many Irish newspapers tributed to many then newspapers under various pseudonyms. Anthologia Germanica (1845), and Romances and Ballads of Ireland (1850), were among his chief works. See O'Donoghue's Life and Wrilings of Mangan, 1897, editions of Poems, 1903, and

There are woollen manufactures. Pop. [somewhat difficult to reduce ; it is best prepared by mixing the oxide or the carhonate with charcoal and subjecting the mixture to a high temperature. The metal is dark hrown or black in colour, takes a high polish and has a specific gravity of 7. It oxidises readily, evolves hydrogen slowly from water and rapidly from sulphuric and hydrochloric acids. It is used commercially for the production of ferromanganese and of various kinds of steel. The chief compounds are: Manganous Oxide (MnO), a dark powder obtained by igniting the higher oxides in a current of hydrogen; Trimanganese Tetroxide (Mn₂O₄), a reddish powder obtained by heating any oxide in the presence of air; Manganese Sesquioxide of air; Manganese Sesquorace (Mn₂O₂), a dark brown powder ohtained by heating any oxide in a mixture of nitrogen (75 per cent.) and oxygen (25 per cent.). Manganese Dioxide (MnO₂), a black solid found native as pyrolusite, and prepared as a hydroxide by shaking up the manganous hydroxide, Mn(OH), with chlorine water. It may be used as a source of oxygen when heated alone or with sulphuric acid; the manganates of the alkalies, formed by fusing dioxide with tho hymanganese droxides of the alkalics; the nermanganates of the alkalics, formed by treating the manganates with acids; Manganous Sutphide (MnS), formed by precipitating solutions of manganese salts with ammonium sulphide; Manganous Sulphate (MnSO.), a pink crystalline solid, formed by heating the dioxide with strong sulphurio acid. (MnCl₂), a ed by pass-acid over red ing over heated mangauese carbonate. Some of the salts of manganeso are used in

The manganates and of sodium and potassium are used in solution as disinfect-

ing fluids.

Mangalarén, prov., Luzon, of the Agno ngayen. Pop.

13,000.

Mange, a parasitio disease of the skin caused by the presence of minute mange-mites. They are of four main kinds: (1) Sarcoptes, which burrow
the skin; (2) Psoroptes; (3)
and (4) Dermatodectes,

more superficial in their M. affects the horse, cow, dog, cat, and also man. notifiable

as also is heep scab. easy dress-

carbonates in iron ores. The metal is

Mangel Wurzel, or Mangold, an im- p portant root erop rich in cano sugar, and derived like sugar beet and garden beet from Bela marilima, a weed (order Chenopodiacem), found on the English S. coast. The varieties of M. are of three types—long, tankard, and globe, red, yellow, or orange in colour. Many varieties are suited to special conditions, and the gold tankard is the most nutritious. The fruit is a rough integument coutaining four or five seeds, and is drilled in April in rows 20 to 30 in. apart, the young plants being sub-sequently singled out 10 to 14 in. apart in the rows. The crop requiring a warm dry climate, is grown chiefly in the S. of England, thriving best in richly manured, dcep, clay loams. Tho root is very sensitive to frost and must be lifted in October, before it is ripe; it is kept in clamps till February before feeding to stock.

Manghishlak, Manghishlak, a region on the eastern shore of the Caspian Sea. Cap. the Area 60,000 Fort Alexandrovsk.

sq. m. Pop. 150,000.

Mangifera, a genus of tropical evergreen trees (order Anacardiaceæ) with alternate entiro leaves and panicles of small flowers, followed by ediblo Specimens are sometimes fruits. grown in loam and sandy peat in the hothouse and occasionally ripen the fruit.

Manglaur, a tn. in the dist. of Saharanpur, United Provinces, India, 50 m. N.E. of Mccrut. Pop. 10,000.

Mangnall, Richmal (1769-1820), a

schoolmistress, was probably horn at Manchester, and received her educa-tion at Crofton Hali, near Wakefield, Yorkshire. She afterwards joined the staff, and eventually became head of the school. She has writton: Historical and Miscellaneous Questions for the Use of Young People, 1800; Half an Hour's Lounge, or Poems, 1805; Compendium of Geography, 1815. Mango, the kidney-shaped fruit,

yellow and red in colour, of the indica) which

both for the us medicinal

and economic uses.

Mangonel (from mangonellus diminutivo of Lat. mangonum, an engine of war), the name given to a contrivance used in ancient and mediæval times for throwing stones at a fortress, etc. It was worked by a counterpoise and had much in common with the ballista.

Mangosteen, the brown orange-like fruit, filled with a most deliciously flavoured sweet pulp, of an evergreen tropical tree (Garcinia mangostana) with red unisoxual flowers (order Guttiferæ).

coast of Kathiawar, India, 69 m. W.N.W. of Diu. Pop. 15,000. Mangrove, or Rhizophora, a genus

of tropical trees of great value in re-claiming coast land. The seeds germinate upon the parent tree, sending down roots of considerable size, and forming as the trees grow a great network which retains vegetable matter, and gradually converts swamps into solid ground. The fruit of Rhizophora maugle is edible.

Manhattan, the co. seat of Riley co., Kansas, U.S.A., 52 m. N.W. of Topeka on the Kansas R. It has iron foundries and manufs. machinery. Pop. (1910) 5722.

Manhattan Island, situated at the mouth of the Hudson R., U.S.A. Its length is about 13 m., and its greatest width about 21 m. It forms the commercial and financial centre and borough of Manhattan, which is the porough of Manhattan, which is the chief residential part of New York City. The rocks of which it is formed rise to a height of more than 240 ft. In the N. of the island. Peter Minuit, the first Dutch governorgeneral, bought it from the Indians in 1626 for the equivalent of 25 dolars (465). lars (£5).

Maniago, a tn. in the prov. of Udine, Italy, 25 m. W.N.W. of Udine. Pop. 5500.

Manichæism, a religion professed and taught by a Persian named Mani (216 A.D.), a man of noble birth and a native of Eobatana. Ho was well educated by his father, and brought up as a Baptist, a sect connected with the Mandeans. From an early age Mani questioned the truth of his religious teaching, and at twenty-five he proclaimed his new faith. At the time of his birth two great religions, ntterly opposed to one another, were the accepted creeds of the world he knew. One was Mithraism, an Iranian creed, and the other was Christianity. These two beliefs, although opposed had many things in common. Mani had studied both, and also the ancient Persian Magism, while his own now faith combined many points from each creed. M. was a dual system of religion; good and evil reigned as equal powers; the first man was a product of Satan, though containing a grant of the light of God Manibo. a spark of the light of God. Mani believed he was the last of the chosen prophets, preached that Noah and Abraham were also prophets, and probably Zoroaster and Buddha; he also tanght a curious, shadowy, spiritual belief in Jesus Christ, though he did not allow He had been a man, or suffered and died. Mani travelled to India, and through Asia to China, preaching his faith and gaining many believers. The Persian king, Shapur I., Mangrol, a seaport on the S.W. was certainly influenced by his teachbitterly hostilo to Mani and his creed, secured his deliverance into their hands to be dealt with. They crucifled him, and flayed the body while yet alive. His followers were persecuted with great cruelty, but the religion continued to increase in the number of its followers, many people died for their falth, and the belief itself existed, though modified by Christian influences, until the 13th century, and is found continually at the base of various carly and mediæval heresies, as the Bozonists, Albi-See Recherches sur le genses, etc. Manichéisme Cumont, etc.

Manifest (from Lat. manifestus, plain), a document, signed by the master of a vessel, and containing a list of all the packages or separate Items of freight on board the vessel, with their distinguishing marks, numbers. destination, description, etc. It is designed for the use and information of the Custom House

officers.

Mainfesto, formerly a public declaration of a prince to begin war and explaining his motives. It was pub-lished within his own territory and communicated to other states through

the channels of diplomacy.
Manihiki or Penrhyn Islands are Manihiki or Penrinn Islands are stuated in the Pacific Ocean, N. of the Society Is., and to the W. of the Marquesas. The chief Islands are Penrhyn, M., and Caroline. They were annexed to Great Britain during the 19th century, and are part of New Zealand for administrative purposes. Area 50 sam. Pon. 1706. poses. Area 50 sq. m. Pop. 1700.

der Euphor-

plant, is extensively cultivated in tropleal America for the production of cassava and taploca. See Cassava.

Manikaland, a region in S.E. Africa,

which forms part of Portuguese E. Africa, and part of Rhodesia, crossed by the railway from Fort Salisbury to Beira. The district produces gold.

Manila, the cap. and principal port of the Philippine Is., on the W. coast of the island of Luzon, at the mouth of the Paslg. It was founded in 1571 by the Spaniards, but was cap-1571 by the Spaniards, but was cap-tured by the American troops under General Wesley Merritt in 1897, and since then many improvements have taken place, both in and about the city. The railway service has been extended, and the small tramways have been replaced by an American electric street-railway. But the

ing; Hormizd, his sneeessor, was greatest improvement is the contolerant and interested in this faith, but Barham I., who succeeded Hormizd was a believer in the power of the priestly caste of Magians, who, the greatest hemp market in the greatest improvement is the contolerant and interested in this faith, which has greatly increased the interested in this faith, which has greatly increased the interested in this faith, which has greatly increased the interested in this faith, which has greatly increased the interested in this faith, which has greatly increased the interested in this greatly increased the interested in this great in the greatest hemp market in the world, and is also a famous port for the export of sugar, copra, and tobnceo, and the import of food stuffs and manufactured articles. 225,000.

Manila Bay, a large bay on the W. of the island Luzon, Philippine Is. Its mouth is 10 m. wide, and it expands in the interior to a width of

Manilius, Gaius, a Roman tribune in 66 B.c. succeeded in getting n law passed which gave to freeducen the right of voting in the same tribe as their patroni. On this being declared void by the senate, he endcavoured to secure Pompey's assistance by pro-posing to confer on him supreme command in the war against Mithri-

dates. Manilius, Marcus or Gaius, a Roman poet, lived probably in the reign of Augustus or Tiberius. He was tho Augustus or Tiberius. He was tho author of a Latin didactio poem about astronomy and astrology en-thiled Astronomica, a work in five books, the first two of which treat of astronomy as the foundation of astrology: the rest of the influence of constellations on human destiny.

Manilla Hemp, the fibre obtained from Musa textilis, which grows and is cultivated in the Philippines. The coarser fibre being utilised for cordage and sail-cloth, and the finer for hand-

kerchiers and scarves.

Manin, Daniel (1804-57), an Italian patriot, elected, during the revolution of 1848, president of the Venetian Republic. From 1831 ho became a recognised leader of Liberal opinion in Venice; in 1847 ho was thrown into prison for a spirited public address of which ho was the author. During the annexation of Lombardy to Pied-mont, M. laid down his authority, but on the defeat of the Sardinian army nt Novnra, March 23, 1849, ito resumed it, and was the animating spirit of the entire population of Venice during the berole defence of the city for four months against the besieging Austrian army. On Aug. 24 Vonice capitulated, but M., with forty of the principal citizens, being ex-cluded from all stipulations, quitted the city. He retired to Paris, where ho died. Maning, Frederick Edward (1812-83),

by birth nn Irishman, in 1833 went to New Zealand and settled at Onakl, and in this country he was made a nuturalised Maori. He took part in the wars of 1845 and 1861, and in 1865 was made n judge for the purpose of the settling titles of land. He wrote: Old

the War in the North in 1845, 1876. Manioc, or Mandioc, see Cassava

Manipur: 1. A native state of India, lying between Assam and Upper Burma. It consists of a valley surpurma. It consists of a valley sur-rounded by mountains, the principal products being tea, rice, cotton, opium, and tobacco. It is a depen-dency of Assam, and is under British rule. Area 8460 sq. m. Pop. about 285,000. 2. Or Imphal, the cap. of the state of Manipur, 236 m. N.W. of Manis see PANGULY.

Manis, see Pangolin.

Manissa (ancient Magnesia ad Sipylum), a tn. of Asla Minor, 20 m. N.E. of Smyrna. It possesses a number of mosques and other buildings, among them the palace of Kara Osman Oglu. It also manufs, cotton. Pop. 38,000.

Manistee, the co. seat of Manistee co., Michigan, U.S.A., on the Pere Marquette Railroad, 110 m. N.W. of Grand Rapids. It produces large quantities of lumber and salt.

(1910) 12.381.

Manitoba, a prov. of the Dominion of Canada, known as the 'home of the world's finest wheat.' The prov., which is 1260 m. long, includes the whole of Lake Manitoba, the greater part of lakes Winnipeg and Winnipegosis, the Dauphin and Swan lakes in the N.W., the Pelican and White Water lakes in the S.W., and many smaller lakes in the total and many smaller lakes; the total area under water in the province is 9405 sq. m. The surface of the province is, on the whole, level, though there are some hilly tracts, such as the Turtle Hills in the S.W. and the Riding Hills further N; which are well wooded. In the E. is a continuation of the old erystalline rock formation which prevails in M., and some of the seenery is wild and and some of the seenery is wild and rugged in character. The chief rivers are the Assiniboine (480 m.) and Red River (665 m., of which over 500 are in U.S.A.). The ebmate is dry and healthy on the whole; hallstorms often damage the growing crops. The trees include the elm, oak, aspen, maple, poplar, etc., and many varieties of fruits are grown. The principal of fruits are grown. The principal crop is wheat, for the cultivation of which the soil is especially suitable, and in addition oats, barley, and potatoes are grown. The mineral wealth of the province is not of very much importance, but lignite has been found in the M. portion of the Tutle Mts., and good coal in the S.E.; there are also salt springs in the N.W. The industries are mainly

New Zealand, 1863; The History of worthy of mention are Brandon the War in the North in 1845, 1876. (14,453), St. Boniface (1991), and Portago la Prairie (6500). The administration is in the hands of a lieutenantgovernor, appointed for five years, an executive council of seven members. and a legislative assembly of forty-two members. The province sends four members to the Canadian Senate, and ten to the House of Commons. The area is 255,732 sq. m. (including the part of Keewatin annexed in 1912), and the pop. 455,614, of which there are more Presbyterians than members of any other sect. Agitations took place in M. concerning the eastern boundary till 1884, and in connection with the Canadian Pacific Railway.

Manitoba Lake, a fresh-water lake of Manitoba, Canada, 60 m. S.W. of Lake Winnipeg. It has an area of 1900 sq. m., with a length of 120 m., and a width of 25 m. Irregular in shape and tideless, the lake is drained by the Little Saskatchewan R. into

Lake Winnipeg.

Manitou, a tn. of El Paso eo., Colorado, U.S.A., 6 m. N.W. of Colorado Springs. Its position, over 6000 ft. above sea-level, in the midst of beautiful scenery at the foot of Pike's Peak, makes it an important centre for summer victors. portant centre for summer visitors. It has also mineral springs, giving it an additional attraction. The 'Garden of the Gods' is close by. Pop. (1910) 1357.

Manitou, the name given by several American Indian tribes to the presiding spirits which figure in their religious beliefs. Their number is un-limited, as individuals are each sup-posed to have a M. or protecting spirit. The M. is in almost all cases some animal chosen by the individual to be the object of his worship.

Manitou: 1. A small tn. in Colorado Manitou; 1. A small th. in Colorado U.S.A. It is a great summer resort, many visitors being attracted by its mineral springs. Pop. 1300. 2. A market th. of the Canadian Pacific Railway, Manitoba, Canada, 102 m. S.W. of Winnipeg. It has flour mills and creamery. Pop. 640.

Manitoulin Islands—comprising

Manitoulin Islands—comprising Grand Manitoulin or Sacred Isle, Little Manitoulin or Cockburn Isle belonging to Canada, and Drummond Isle belonging to the state of Michigan—are situated in Lake Huron. Grand Manitoulin is 90 m. long by 5 to 30 m. broad. Pop. 2000.

Manitowoc, the co. seat of Manitowoo co., Wisconsin, U.S.A., on Lake Michigan, and on the Chicago and North-Western and the Wisconsin Central railroads. Its harbour is agricultural, dairy farming being on North-Western and the Wisconsin the increase, whilst horses, cattle, Central railroads. Its harbour is swine, and poultry are reared. The contral and centre of trade is Win-large quantities of grain being expital and centre of trade is Win-large quantities of grain being expipe (250,000), whilst other towns ported. It manufs. machinery, iron

Pop. (1910) 13.027. Manizales, a tn. in the dept. of Manizales, Colombia, 73 m. S. of Medellin. The inhabitants are en-

gaged in gold mining. Pop. 20,000. Mankato, the co. seat of Blue Earth

co., Minnesota, U.S.A., on the Minnesota R., 85 m. S.W. of St. Paul. It has stone quarries, iron foundries, and machine shops, and (1910) 10,365.

Manley, Mrs. Mary de la Rivière (1663-1724), an author, wrote several plays, two of which, The Lost Lover and The Royal Mischief, were produced in 1696 respectively at Drury Lane and Lincoln's Inn Fields. She led an irregular life, and published several scurrilous works She is best re-Manners of Several Memoirs and Quality of both Sexes from the New Atlantis (1709-10) membered for the Secret Memoirs and Atlantis (1709-10), in which slandered many well folk. After her death Curll published Mrs. Manley's History of her own Life and Times, subsequently called The

Adventures of Rivella.

Manlius, M., consul 392 B.C.; took refuge in the capitol when Rome was taken by the Gauls in 390. One night, taken by the Gauls in 390. One night, when the Gauls endeavoured to ascend the capitol, M. was roused from his sleep by the cackling of the geese; collecting hastily a body of men, he succeeded in driving back the enemy who had just reached the summit of the hili. From this heroic deed he is said to have received the surname of Capitolinus. In 385 he defended the cause of the plebeians who were suffering severely from the harsh and cruel treatment of their patrician creditors. In the following year he was charged with high treason by the patricians and being condemned to death by the people, he was hurled down the Tarpelan Rock by the tribunes. The members of the Maulia gens accordingly resolved that none of them should ever bear in future the praenomen of

Manlleu, a tn. in Catalonia, Spain, 40 m. N. of Barcelona. Pop. 6000. Manly, a tn. of Cumberland co., New South Wales, 8 m. N.E. of

Marcus.

New South Wales, 8 m. N.E. of Sydney. Pop. 5000.

Mann, Horace, LL.D. (1796-1859), an American educationist, born at Franklin, Massachusetts, graduated at Brown University, Providence, and commenced the study of law. Elected to the legislature of Massachusetts in 1827, and in 1836 to the state Senate, of which he became president. He was for eleven years secretary of the Roard of Education. secretary of the Board of Education. In 1843 he made a visit to educational 1852, and again in 1858, he was First

goods, and agricultural implements. lestablishments in Europe. His Report was reprinted both in England and America. In 1848 he was elected to Congress, as the successor of ex-president John Quiney Adams, whese example he followed in energetic opposition to the extension of slavery. His principal works are his cdueational reports, and Slavery, Letters, and Speeches, 1851. See Life by his wife, 1865; also C. A. Hubheil, Horace Mann, Educator, Patriol, and Reformer, 1910.

Mann, Sir Horace, see WALPOLE,

HORACE. Mann, Tom (b. 1856), a British working-class leader, formerly president of the International Transport Workers' Federation, and now vice-president of the Workers' Uniou, of which he was one of the founders. He worked from nine to fourteen on farm or in mine, served apprenticeship in engineering for seven years at Birmingham, settled in London in 1877, joined A.S.E. in 1881, and became a Socialist in 1885. He was one of the Socialist in 1885. He was one of the leaders of the Great Dock Strike (1889), has been secretary of the L.L.P., and first secretary of the London Reform Union and of the National Democratic League, and has thrice stood as parliamentary candidate. After residing in Australia, where he continued his Socialist propaganda and was imprisoned, he re-turned to England, where he hecame leader of the newly rising Syndicalist movement, and was imprisoned for his connection with the 'Don't Shoot!' manifesto to soldiers. Manna, a name given to a variety

of natural products. Many people suppose the M. eaten by the Israelites in the wilderness to have Lecanora esculenta, an edible lichen which is removed from rocks by wind and carried long distances. According to others, it is the gummy by a sacch punctrce, tured occus. The M. or flowering ash (Fraxinus ornus) exudes a sweet substance coa-

taining mannite, a sugar commonly found in many forms of vegetable life. In Calabria tho M. gatherers make Incisions in the tree boles to stimulate the exudation.

Mannargudi, a tn. in the dist. of Tanjore, Madras Presidency, India, 22 m. E.S.E. of Tanjore. Its pagoda is noteworthy. Pop. 20,000.
Manners, Lord John James Robert, seventh Duke of Rutland (1818-1906),

a statesman, ontered parliament as a Tory in 1841, and became one of the Young England, party. He figures

in Coningsby as Lord Henry Sidney, and in other of his leader's novels.

the

Commissioner of Works, with a scat malting, and its trade consists in timin the cabinet, in the Derhy adminisher, corn, and malt. Pop. 900. tration; and under Disraeli (1874-80) Mannite, or Manna Sugar, C. H. (OH). and Salishury (1885-86) he held the office of Postmaster-General. In Salishury's second ministry (1886-92) he was Chancellor of the duchy of Lancaster. In 1883 ho succeeded to the dukedom.

Manheim, a tn. of Baden, Germany, situated at the junction of the Neckar and the Rhine, 46 m. S.S.W. of Frankfort. The town is S.S.W. of Frankfort. The town is low-lying, being protected by a dike, and the plan of its streets is characterised by its extreme regularity. The chief buildings of interest are the palace, public library, observatory, and national theatre. The trade of the town is considerable, heing facilitated by a good harbour. The principal manufactures are chemicals,

but suffered many vicissitudes during the Thirty Years War. It was the Thirty Years' War. I annexed to Baden in 1802. Pop. 193,600.

Manning, Henry Edward (1808-92), cardinal and theologian, born at Totterldge, Herts, and educated at Harrow and Oxford, where he became notable as an cloquent preacher and as one of the ablest of the Tractarian party. He was rector of Woollavington-cum-Graffham, 1833, and archdeacon of Chichester, 1840. In 1851 he entered the Church of Rome, in which he attached himself to the Ultramontane party. More even than Newman he was the leading spirit of the Roman Church in England. His writings consist of sermons, of which he published several volumes hefore his secession from the Church of England, and controversial works, including Petri Privilegium, 1871; The Vatican Decrees, 1875, in answer to Gladstone's Vaticanism; and The Eternal Priesthood, 1883. He became Roman Catbolic archbishop of West-

minster, 1865, and cardinal, 1875.
Manning (or Mannyng), Robert, or Robert of Brunne (c. 1264-1338), a poet, was a native of Bourno, Lincolnshire. Ho wrote Handlung Synne, a translation of the Manuel des Pechiez of William of Wadington, and The Chronicle of England, which is a new version in octosyllable rhyme of Wace's Brut d'Angleterre plus a translation of the French rhymning chronicle of Peter Langtoft. M.'s work is of great linguistic importance, and did much to further the adoption of the Midland dialect as the acknow-

the chief constituent of manna, an exudation from the manna ash tree, Fraxinus ornus. M. also occurs in onions, brown sea-weed, and many other plants. It is a crystalline substance readily solublo in water and alcohol. M. is obtained from manna by extraction with alcohol and subsequent crystallisation. It was formerly used as an aperiont in Europe, and is still employed for this purposo

in S. America.

Mannlicher, Ferdinand (1848-1904), an inventor, horn at Mainz, and was for a number of years a railway engineer. He is the inventor of many improvements in fire-arms, among

them a repeating rifle.

Manns, Sir Augustus (1825-1907), a musical conductor, born at Stolzen-herg, near Stettin. His first lessous in music were received from a village teacher, and these led eventually to his joining Gungl's orchestra, Berlin, from which he was transferred to be conductor at Kroll's Garden in tho same town, which post he held until 1851. Three years later he became sub-conductor of the Crystal Palace hand, and in the following year conductor.
Man-of-War Bird, or Frigate Bird

(Tachypetes aquilus), a natatorial bird with an enormous expansion of wings and great powers of flight.

Manometer, an instrument for determining the pressure of gases enclosed in a vessel. The simplest form consists of a long straight tube dipping into a box containing mer-eury. The pressure of the gas to be gauged is communicated through an opening in the hox to the surface of the mercury, and the upper end of the tube is open to the atmosphere. the pressure of the enclosed gas is greater than that of the atmosphere, the mcreury is forced up the tube. A pressure of two atmospheres forces the mercury upwards to a distance of 30 in. above the level of the mercury in the box, so that this form of M. cannot bo used for great pressures. Another form used for small pressures consists of a bent tube open at both ends and containing a quantity of mercury in the bend. When the pressure of the onclosed gas is communicated to one surface of the mercury, the mercury in the other limb rises or falls as the pressure is greater or less than that of the atmosphere. If, for instance, the mercury sinks h in. in one limb, it will rise h in. in ledged literary instrument.

Manningtree, a market in. of Essex, will be 2h in. The pressure of the enclosed gas will therefore be equal to Colchester. The chief industry is one atmosphere, plus the weight of

sures a U-tube closed at one end is em-ployed. The open end communicates with the enclosed gas and the closed eud is furnished with a scale. If the pressure of the enclosed gas is equal to that of the atmosphere, the mercury will be at the same level in both limbs. If the pressure rises above that of the atmosphere, the mercury in the open limb sinks, and that in the closed limb rises, thus compressing the air in the closed limb. Suppose H to re-present the length of the air column at atmospheric pressure, and h the length at the pressure of the gas; then the pressure of the air column is $\frac{H}{h}$. The difference in height of the two mercury columns is 2(H-h), therefore the pressure of the enclosed gas must be equal to the weight of a column of mercury whose length is $2(H-h)+\frac{H}{h}$ atmospheres.

feudal noble holding of the king is generally found to consist of several holdings called maneria or Ms., which for the most part are conterminus with the rills, towns, or rillages. A M. appears to have denoted such distriot of a great personage as he kept in his own hands for the abode and use of his family, and hence this dis-trict was also termed demesne (or terræ dominicales, from Lat. domus, home) lands, in contradistinction to the tenemental lands, which the lord distributed among his tenants. In the domain there was generally a mansion or manor-house, which was occupied by the owner of the manerium or by his bailiff (for a number of the greater barons held numerous M not therefore personally

system under LAND.) Quite carly in declared in favour of the Infanta the English land-holding system the Isabel. As a writer he was greatly great barons granted out smaller Ms. by way of subinfeudation, to be held of themselves, the seignory of such lesser lords being termed an honour. These inferior lords in their turn carved out of their estates yet smaller estates, and the practice would doubtless have been followed out almost to infinity but for that provision in Magna Charta, designed in the interest of the greater barons, who found that they were being deprived of their they were being deprived of their Manrique, Jorge (1440-78), a Spanfoudal profits, which enforced on ish poet and soldier, probably born at lesser barons the obligation to retain Paredes de Nava. He owes his reputa-

2h in. of mercury. For greater pres- lords' demands. Later the statute of sures a 11-tube closed at one end is em- | Quia Emptoris (see under DE DONIS) forbade subinfeudation altogether by the provision that the grantee should always hold not of the grantor but of the chief lord of the fee (see ESTATE). All Ms. existing at the present day wore, therefore, stereotyped from the time of that statute (Edward I.). The reservation of mineral rights, exi-guous quit rents from M. freeholders. and fines on admission to copyliold tenants are now the principal remaining benefits attaching to a M.

France, in the 28 m. from Aix. valley of the

Durance, and has sulphurous springs and beds of lignite and bitumen. Pop. 5500.

Manrent, in Scots history, a kind of bondage whereby free persons be-came the bondmen or followers of their patrons and defenders. Hence equivalent to homage, or the attendance and personal service connoted by homage. The term is a corruption of manred (A.-S. manraden, homage, from mann, vassal, and raeden, condition). The band or bond of M. is picturesquely defined by Skene: 'It is a bande of manrent, quhen (when) ony person promises to serve and vther (other), in sik sorto (in such a way), that ho sall be friend to all his friends, and foe to all his foes, against all deadly.

Manresa, a tn. of Spain in the prov. of Barcelona, on the R. Cardoner, 41 m. N.W. of Barcelona. It has im-portant iron foundries and manufs. of cotton and woollen goods, ribbons, hats, paper, soap, and spirits. The collegiate church of Santa Maria is a fine example of Spanish Gothio, and contains a fine 15th-century Floren-

tine altar-frontal. Pop. 24,000. Manrique, Gomez (c. 1412-91), Spanish poet and soldier, born at Alvaro de Luna

all), together with a cert 1 II., went into of arable and meadow land in scat-opposition against Miguel Lucas de tered strips. (See as to common field Tranzo in the reign of Henry IV., and

and comes, modelled on and satires as leed, he appears anish dramatist.

Among his works are Representación del nascimiento de Nuestro Señor, a play in the Passion, and two momas, His poems were first or interludes. printed in 1885, and edited by Antonio Paz y Melia.

sufficient land to answer their over- tion as a poet to Coplas por la muerle

his father, which, with its sublime expression, ranks among the first poems of the world.

poems of the world.

Mans, Le, a tn. of France, cap. of
the dept. of Sarthe, 112 m. S.W. of
Paris. It has a eathedral, originally founded by St. Julian, which contains the tomb of Berengaria, queen
of Richard Cœur do Lion. There is
also the hôtel de ville, built in 1756 on
the site of the former eastle of the the site of the former castle of the counts of Maine, and the prefecture (1760), which occupies the site of the monastery of La Couture, and contains the library and the communal archives. Le M. Is the seat of a bishoppie dating from the 3rd century, and is an important railway centre. Tho ehief industries are the state manuf. of tobacco, the preparation of preserved vegetables, fish, etc., tanning, hemp-spinning, and the manuf. of coarso ironmongery, machines, watches, and clocks, stained glass windows railway carriages, and cloth. Pop. 69,361.

Mansard (or Mansart), (1598-1666), a Fronch archite at Paris. He made uso of a pecunal kind of roof, which had been used 100 years before by Lescot, but which henceforth was called the Mansard roof. Among his buildings, the chief are the Château de Maisons-sur-Scine, and the churches of Sainte-Marie de Chaillot, the Minimes do la Place Royale, and the Visitation de Sainte-Marie in the Rue Sainte-

Antoine.

Mansard (or Mansart), Jules Har-(1648-1708), an douin architect, nephew of n iń tho .IV., Paris. principal thé including t

Malson de Saint-Cyr, the Grand Trianon, and tho dome of the Hôtel des Invalides. He also built the Château de Clagny for Madame de Montespan.

Mansard Roof, a curbed roof which provides for habitable rooms within it. It is common in the modern châteaux and public buildings in Franco.

Mansarowar, see Manasarowar.

Manse, a namo given in Scotland to the house of the minister of the Established Church. Every first minister of a rural parish is ontitled to his M.: if there is not one existing, the landed proprietors in the parish are bound to build one. He is also en-titled to a stable or barn as part of his dwelling-house, and his M, when built, must be kept in repair by the

de su padre, an elegy on the death of | During the time occupied by rebuilding or repairs, the minister is entitled to an allowance from the heritors as manse-rent. By statute the M. must be near to the church.

Mansel, Henry Longueville (1820-71), a metaphysician, born in Northamptonshire. He was educated at Mer-ohant Taylors' School and St. John's College, Oxford, and took holy orders in 1844, soon proving himself to be a strong Tory and a high churchman. He was Bampton lecturer in 1858, and was engaged in controversy with Maurice, Goldwin Smith, and Mill; select preacher, 1860-62 and 1869-71, and professor of ecclesiastical history, 1866-68. In 1868 he delivered a course of lectures upon The Gnostic Heresics, of lectures upon The Unosuc Heresies, and in the same year was appointed to the deanery of St. Paul's. Among his works are: Phrontislerion, 1850; Prolegomena Logica, 1851; The Limits of Demonstrative Science, 1853; and Man's Conception of Eternity, 1854. He also contributed to The Speaker's Adds to Faith, and the lectures of Sir the lectures of Sir

the lectures of Sir . of whom he was

Mansergh, James (1834-1905), a civil engineer, born at Lanoaster. He was ongaged in Brazii (1855-59) as engineer to the contractor for the Dom Pedro II. railway, and helped in the construction of the Mid-Wales and Llandilo and Carmarthen railways (1862-65). But he made a special study of water-works, drainage, and sewerago, and the Elan Valley water schemo for Birmingham, onened by King Edward VII. and и топомег. opened by King Edward VII. and Queen Alexandra in 1904, is among his achievements in this direction.

Mansfeld, Ernst Graf von (1585-1626), illegitimate son of Pierre Ernst, and one of the greatest generals of the Thirty Years' War. First fought under the Duke of Savoy against the Spaniards. Sent to help the Bohemian rebels, he took Pilsen and compelled Count Bucquoi to evacuate Bohemia, but afterwards induced the Bohemians to make Frederiok, the elector pelatine, their king. The latter being defeated by the imperial troops, M. for a long time held out at Pilsen and Thabor, time field out at Pilsen and Thabor, but yielding to superior numbers he retreated to the Palatinato (1621). The following year he ravaged Alsace and, joining forces with Frederick, defied both the Bavarians and the Hessians. Entering Belgium and uniting with the Duke of Bunswick, he defeated the Spaniards at Flourus and preferated into Westphelia and penetrated into Westphalia, heritors, but these may, after the M. pillaging so many towns that the inis 'mado suffeient,' apply to the habitants of the province offered him presbytery to declare it free, when a considerable sum to depart. In the incumbent must do the repairs. 1625, at the head of a motley army he re-entered Germany, but sustain-Gordon rlots, 1780, and he retired ing defeat at the hands of Wallen-from office in 1788. He did much stein, he retreated to Brandenburg. stein, he retreated to Brandenburg. to improve mereantilo law, the law of evidence, and the procedure of Austria he elected to try his fortunes courts, and as a parliamentary dehater in Venice, but died at Vranovitz.

Mansfeld, Petor Ernst I., Count (1517-1604), a governor of Luxemburg, served Phillp II. of Spain at St. Quentin and in the Netherlands. He went to the aid of the king of France with a body of troops when he was fighting against the Huguenots, and was present at the battle of Moncontour (1569).

Mansfield: 1. A market tn. and municipal bor. of Nottinghamshire, England, on the Mann, situated in the midst of an important coal distriet on the outskirts of Sherwood There are manufs, of lace, thread, boots, and machinery, also iron foundries and breweries, and to the N. there are quarries of limestone and sandstone. It was formerly the residence of the Mercian kings, but now the manor belongs to the Duke of Portlaud. Pop. (1911) 36,897. 2. A city and co. seat of Richland co., Ohio, U.S.A., 66 m. S.W. of Cleveland. It is the seat of the Ohio state reformatory, and has an extensive trade with the surrounding agricul-tural country. Its manufs. consist of

'larl of (1705-93), a judge, born at Scone in Perthshire. He was educated at Westminster School, and at Christ Church, Oxford, and having his degree of M.A. was called t bar lu 1730. He was made entering parliament as member for Boroughbridge, and in 1743-44 proved Boroughbridge, and in 1743-44 proved himself the ablest defender of the government in the House of Commons. In 1754 he became attorney-general to the Duke of Newcastle's administration, which he defended against the attacks of Pitt, and in 1756 was called to the degree of the color of the c roo was estated to the deper of serjeant-at-law, sworn in as lord chief justice of the king's bench, and ereated Baron M. in the county of Nottingham. He incurred in 1767 some hatred by discountenaneing some prosecutions under the penal law of 1700 which mado celebration and still further increased his unsupplier to the case would be otherwise. For popularity by his conduct in the case of Wilkes in 1768, and by his directions to the jury in three cases of would be referred to the there were evidence that the parent would benefit pecunised in the parent would be a sign and not negligence at all, the case would be otherwise. For parent above, if there were evidence that the parent would benefit pecunised in the parent would be a sign and not negligence at all, and still further increased his unsupplier to the case would be otherwise. For parent above, if there were evidence of the parent would be a sign and not negligence at all, and still further increased his unsupplier to the case would be otherwise. For parent above, if there were evidence that the parent would be a sign and not negligence at all, and the case would be otherwise. For parent above, if there were evidence that the parent would be a sign and not negligence at all, and the case would be otherwise. For parent above, if there were evidence that the parent would be a sign and not negligence at all, and the case would be otherwise. For parent above, if there were evidence that the parent would be negligence at all, and the case would be otherwise. For parent above, if there were evidence that the parent would be negligence at all, and the par

was second only to Chatham. became Earl of Mansfield in 1776

Mansfield College, a theological in-stitution opened in 1889 in Oxford, to give instruction to students who wish to become Congregational ministers. It is a non-university college, and is devoted solely to the study of

theology Mansfield Woodhouse, a tn. of Nottinghamshire, 11 m. N. of Mansfield. Two Roman villas were discovered in the neighbourhood in 1786.

(1911) 4800. Mansion House, an oblong building in the centre of the City of London, at the end of Cheapside. It is the official residence of the Lord Mayor of London, and was finished about 1750. It has an interesting hexastylo Corinthian portico.

Manslaughter is the killing of another: (1) On a 'sudden affray, killing of i.e. without premeditated design; e.g. two persons are drinking together at a bar and one commences an argument, in the course of which the other, suddenly infuriated, picks up a heavy pewter pot and kills him with a blow on the head; or (2) through culpable negligence. The first class obviously closely approximates to murder. c.g. the slayer were carrying weapons that fact of itself might well afford evidence of a deliberate intent to seek But if he merely picked up ile, which

to hand, eounsel and solicitor-general to Lord his act would in all probability Wilmington's government, 1742, amount only to M. The second class entering parliament as member for forms the bulk of charges of M. An endless variety of negligent acts causing death may amount to M.: e.g. a labourer without

cautions,

highway peculiar person, not believing in the officacy of doctors, allows his child to dic of disease when it might easily have been cured; a boxer, knowing his opponent to be in extremis, gives him a 'knock-out' blow and kills him. But negligence, however gross, eannot

be the basis of a charge of murder, though if the jury believe the facts tions to the jury in three cases of arily by the child's death, and was seditious libel arising out of the publication and sale of Junius's the child to dio would be murder. Letter to the king in 1770. His house Frequently an indictment (q.v.) for was sacked and burnt during the murder contains an alternative count doubtful about the circumstances.

homicide. The taking of another's life without intention of killing, hut in circumstances which display such a complete and wicked recklessness as 'to imply a disposition depraved pable homicide' are included all sorts of bomicide which are neither casual nor justifiable.

Mpro:

34 r of Damietta hranch of the Nile. dates from the crusades, and marks the spot where the Crusaders were fiually overcomo (Mansura means 'the victorious'). M. manufs. sail cloth, cottons, linens, and crepe. Pop. 40,000.

Mant, Richard (1776-1848), an Euglish divine, born at Southampton. He was elected to a fellowship at Oriel College, Oxford, 1798, and gained the chancellor's prize with his essay On Commerce, 1799. He became He becamo On Commerce, 1799. He became vicar of Coggeshall, Essex, 1810, rector of St. Botolph's, 1815, and hishop of Killaloe and Kilfenaragh, 1820, being translated to Down and Connar, 1823. He published poetical, theological, and historical works,

theological, and historical works, among which may be mentioned History of the Church of Ireland, 1840. Mantegna, Andrea (1431-1506), a painter, horn in Vicenza. He studied in the school of Squarcione, who outered him in the guild of painters before he was eleven, but afterwards are under the influence of Ballini camo under the influence of Bellini, whose daughter he married. His first picture, a Madonna, was produced when he was seventeen, and in 1452 when he was seventeen, and in 1452 Prussia in 1861. In 1864 he served he executed a fresco for the church of in the Danish War as a lioutenant-S. Antonio in Padua, and in altar-piece of St. Luke as Saints for the church of S.

But his reputation was conf

garded as examples of his hest work. In 1459 he went to Verona, and painted an attar-piece for the church of S. Zeno, and in 1460 took up his abode at Mantua at the invitation of the Marquis Ludovico Gonzaga. Procecding to Rome in 1488 he painted a scries of frescoes in the chapel of the Belvedere in the Vatican, among which were the noted 'Baptism of Christ,' hut all were destroyed by Plus VI. He returned to Mantua in 1490 to continue the 'Triumph of Casar, his masterpicce, a scries of nine pictures each 9 ft. squarc,

for M. where the prosecution are Court. Another notable picture of his later years was his 'Madonna della In Scots law, the term M. is not used. Vittoria' (1495), now in the Louvre, The cardinal division of criminal which is one of his most attractively homicide is into murder and culpable leautiful works. M. was also an engraver, an engraved.

Bacchanal The Enton

rection. He had a very marked enough to be wholly regardless of influence over the style of his age consequences, is murder. Under 'cul- which extended over Italian art generally.

Mantell, Gideon Algernon (1790-1852), a geologist, born in Lewes, Cassex. He was articled to a surgeon

his native town, finally becoming s partner, and was very successful
M. in his profession, but all his spare
arks time was devoted to the study of natural history and geology, and ho subsequently gave up surgery. He made a collection of fossils, which he afterwards sold to the British Museum, and published many gco-

Museum, and published many goological works, among which may he
mentioned The Wonders of Geology.
He was made F.R.S. in 1825.
Mantes, a th. of France in dept.
Seinc-et-Oise, 22½ m. N.W. of Vorsailles, on the l. h. of the Seine.
Burnt in 1087 in retailation for a
witteeism of the French king, Philip I.,
by William the Conqueror, who sustained a mortal wound there. It bolongod for some time to Charles the
Bad. but in 1364 was secured for Bad, but in 1364 was secured for Charles I. by Bertrand du Guesclin. Notable for the ruins of the church of St. Maclou. Manufs. musical instru-ments and incubators. Pop. 8500. Manteuffel, Edwin Hans Karl,

Manteuffel, Edwin Hans Karl, Freiherr von (1809-85), a Prussian general and diplomatist. Appointed chief of the military cannot in 1857 and adjutant-general of the King of

· was made civil r of Schleswig. Iolstein on the ans, who then

his frescoes in the chapel of S. Chape how it, had bloken the conventions foro, in the church of S. Agostino of Gastein by appealing to the Gerdegli Eremitani, which are still remanic Confederation. On the latter deciding against Prussia, M., cooperating with Falkenstein, crossed the Elbe and invaded Hanover. Having humbled the Hanoverian army M. was placed in sole command against the united forces of Southern Germany. After this he went as envoy to St. Petersburg to advance Prussian interests in Germany. In the Franco-German War (1870-71) he forced Bazaine to capitulate at Metz, defeated Farre at Amiens, and forced Clenchant to retreat into Switzerland.

Manticore, a mythical creature, used in heraldic devices, having the painted in tempera, now in Hampton head of a man, the body of a bon, a scorpion's sting, and porcupine's saves the right of any one to set a M., quills.

Mantinea, or Mantineia (Marrireta), one of the most ancient cities of Arcadia, situated on the borders of Argolis, S. of Orchomenus. It was one of the most powerful towns of Arcadia, and continued to be so down to the time of the Achean League. It was the scene of five great battles, the first of which was fought in 418 and resulted in a defeat of the combined Argives, Mantineians, and Athenians, by the Lacedemonians. The second took place about 367, when the Spartans were defeated and Epaminondas slain, the third in 295, when Demetrius Poliorcetes defeated Archidamus and the Spartans; the fourth in 242, when Aratus and the Aoheans defeated and killed Agis at the head of the Spartans; and the fifth in 207, which again resulted in the defeat of the Lacdemonians under the tyrant Machamdas, who fell in the battle.

Mantiqueira, Serra da, a granitic mountain chaln in S.E. Brazil running parallel to the coast. Its highest Itatiala-assu (10,000 ft.), point is which is the loftiest summit of Brazil.

Mantis, a genus of the family of thenterous insects Mantides. The orthopterous insects Mantldæ. Tho first pair of llmbs are large, powerful, and peculiarly modified, and are used to selze and maim lasects for food. The praying M. (M. religiosa) occurs in Southern Europe, and is so called from the devotional attitude of the creature as it lies in wait for its prey. Many of the species have developed colour protection to a wonderful degree, so as to be hardly distinguishable from the leaves or flowers of the plant which they frequent. Their pugnacity and deadly armament have caused them to be kept and matched against one another like gamecocks.

Mantissa, see Logaritims.

Mantling, or Lambrequin, in heraldry, is an appendage hanging down from the helmet and passing bohind the escutcheon. In British heraldry, the sovereign's M. is of gold, lined with ermine; that of peers, of crimson velvet, lined with ermine.

Man-trap. Formerly, Ms. were set on land and in houses without let or hindrance. But the offences against the Persens Act, 1861, punishes with penal servitude the act of 'setting engines calculated to destroy human lifo or inflict grievous bodily harm, and specifically mentions spring guns former, born at Bern. and Ms. among such offending dovices. Any person who comes into possession of any land on which Ms. aro set, and knowingly allows them to remain there, is equally punishable. Homieldo resulting from such traps is man-slaughter. But the Act expressiy

spring gun or any other 'engino' in his dwelling-house between sunset and sunrise for the purpose of pro-

tecting the house.

Mantua, or Mantova, the tn. of, stands on an island about 5 m. in circumference, in the middle of a lageon formed by the Mincio. It is well built, with wide streets and squaresand contains many handsome structures. The principal buildings are the cathedral, one of the finest in Italy; the church of Sant-Andrea; the churches of San-Maurizio and San-Sebastiano; the house of Giulio Romano, whose works as a painter and an architect form the greatest glory of the city; the church of Santa-Barbara, rich in paintings; the public library of 80,000 volumes, and the museum, in which is a valuable soulpture gallery; the ducal palace, an old vast irregular structure, partly re-built by Giulio Romano, which contains some good paintings. The chlef industries are tanning, printing, brewing, and iron working. Pop. 32,000.

Manu (Sanskrit, man), or Manu Vaivasvata ('the sun-born'), the seventh of a class of fourteen seventh of a class of fourteen demiurgio beings, each of whom presides over a period of M. He is rogarded as the progenitor of the pre-sent race, and was founder and first Ayodhyo. To hlm of ascribed the so-called Laws of Manu, as well as a work on Vedic ritual.

Manuel, Francisce (1734-1819), a Portuguese poet, born at Lisbon. Ho was the writer of odes and various other kinds of poetry, but was especially famous for his lyries. Ho was expected to the form Poptural to compelled to fleo from Portugal to escape the Inquisition, and died at Versailles.

Manuel, Don Juan (1282-1347), a Spanish writer and statesman, was connected with the royal house of Castile and Leon, and on the death of Ferdinand IV. (1312) acted as regent of the kingdom during the minority of Alphonso XI. As a writer he occupies an important place in the literature of the 14th century. work is El . of fifty tale ho also wr

well as sev Libro infinido, a treatisc on education and Las Mancias del amor.

Manuel, Nicelas (1484 – 1530), a Swiss portralt painter, poet, and re-former, born at Bern. He studied painting first at Colmar, and after-wards at Venico, under Titian, and was commissioned to paint a series of plctures for the monastery of his native city. This work, the Dance of Death, was in the style of Helbeia. but only copies of it exist, and another

excellent work, 'Solomon's Idolatry,' most satisfactory way of storing is to has also perished. In his latter years pile the M. on a bed of dry earth,

Mysterics, and popular songs.

Manures, or Fertilisers, those subetances, organic or inorganic, by which the fertility of the soil is main-tained. The great bulk of tho tissues of plants is built up from natural sources that are apparently inexhaustible in most parts of the world. These are water and carbonic acid gas, but in addition, mineral substances and nitrogen are essential to the growth of plants, and their presence in the soil in minimum propertions is necessary for the production of satisfactory crops. In a state of nature plant food is accumulated with the decay of animal and vegetable substances, and also to some extent by the action of leguminous plants in combination with certain micro-organisms of the soil. These draw upon the atmospheric nitrogen in the air and fix it in the soil. Farmyard M. is the chief fertiliser in general use. It is composed of the excreta of animals and straw, peat-moss, or other litter. The fertilising value of animal excreta varies considerably, not only with the species of animals, but with their age and condition. Young growing stock use up a greater proportion of those parts of the food which have manurial properties than which i mature animals with the exception of ture of milking cows. It foll that beyond a certain the food the greater value of the M. Lir

decorticated cotton cake, for example, aro rich in nitrogenous food, and their uso makes richer M. than starchy foods, such as wheat, barley, oats, maizo, and rice. If poorly nitro-genous food has to be much used on account of considerations of price, compensation to the soil is called for. The condition of farmyard M. has much bearing upon its value; fresher it is, the more slowly its constituents become available as plant food. On this account, old and well-rotted dung is applied to light, porous soils, so that the crop can make use of it with the minimum of loss. In the storage of farmyard M. much loss of the liquid, which contains the most soluble and therefore the most immediately valuable fertilising elements, is avoided if an underground etorage tank can be provided for its collection. It is often altogether wasted on farms, most of the solid-residue having little more value than that of its mechanical effect.

M. took an active part in public covering it occasionally with a thin oil, and finally with a thick The possibilities of artificial erst revealed by Liebig, who

Manus

treating boncs with sulphuric acid, the result being what is known as 'dissolved bones.' 'Dissolved bone compounds' usually contain, in addition, shoddy, ground leather, dried blood, fish guano, ctc., and though each of these and similar materials have fertilising value, the compound may be of doubtful utility. Among the chief artificial fertilisers in use are the following: nitrate of soda, obtained mainly from the W. coast of S. America, is one of the most concentrated forms of nitrogenous M., and being very soluble is generally used as a top-dressing. Even more concentrated is sulphate of ammonia, but though freely soluble is slower in action. It is a refuso product of gas works. The presence of this salt in soot gives it its chief manurial value. Nitrate of lime and calcium cyanamide are now made from atmospheric nitrogen, and their

by treating finely ground mineral phosphates with sulphurio acid, is the oheapest source of soluble phosphate. The percentage of soluble phosphates varies from about 25 to about 75 per cent. Basic slag is a phosphatic M., which is a by-product in the manufac-80 per

eve of th, and out 85 per cent. of the total phosphate is soluble in a 2 per cent. solution of citric acid, it is a very efficacious M. Basic slag also contains limo and, like other calcarcous substances, is of great value in reducing plant foods to a condition in which they are available for assimilation. The chief potash M. are sulphate of potash (kainit), a natural German salt which contains about 121 per cent. of potash and muriate of potash. The effect of potash M. varies greatly with different soils, and experimental trial is desirable to see whether they are needed in a particular case; but usually potatoes pay for a light applica-tion before the crop is planted.

Manus, or Hand, may be defined as a special fore-limb termination distinguished by the faculty which it possesses of opposing the pollex or thumb to the other fingers, so that small articles may be grasped. The possession of two hands was sufficient to classify man as a distinct order, Bimana. It may be thought that The Bimana.

four-handed animals (monkeys, etc.) entire collection is specified in the are better equipped than man, but in Corpus Inscript. Latinarum, vol. iii.). reality the former lack the intricacy and delicacy of manipulation possessed by the latter, and in the case of the lower animals the fore-hands are needed for locomotion and support.

Bones .- The hand possesses twentyseven bones, viz. eight carpels in the wrist, roughly arranged in two rows of four each; fivo metacarpels, forming the bony support of the palm; fourteen phalanges of the fingers, the thumb containing two bones and the

others three each. Movements.—The nervous connections of the hand are of great intricacy. The several bones arc strongly bound together, each bone being joined to some three or four others. The turning movements are characteristic of the fore-limb and of the human species. The turning of the palm downwards is termed pronation (see ARM), while supination, which is most highly developed in man, is the turning of the palm upwards as for receiving objects. The movements are brought about by the pronator and supinator muscles assisted by the biceps muscle. greater power possessed in supination has established the thread direction in such objects as serews, gimlets, etc. The flexing of the wrist and hand upon the forearm is brought about by the combined action of three muscles, while the flexing of each finger is caused by two muscles lying along the inner sido of the digit, the deeper flexor which is attached to the first phalange passing through a perforation in the superficial flexor, which is attached to the second phalange—a most ingenious contrivance.

Deformities (congenital) are fairly common in some families, and are marked by excess or lack of digits. The joints are frequently the seat of

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tlon is more rare, but may be acquired. The term 'hand' has a variety of uses in current speech, and is used technically as equalling four inohes in horse measurement.

Manuscripts. In ancient Greece and Rome waxen tablets in codex permanent MSS. A codex contained cither one or more leaves of wood eoated with black wax and held tofound in Egypt are to be seen in Latin Palwography: Facsimiles of the British Museum, extant Latin MSS. and Inscriptions. edited by codices being far more numerous (the Bond, Thompson, and Warner.

But the commonest material for MSS, of ancient Greece and Rome was papyrus, and this substanco continued to be used in Europe oven after the introduction of vellum, and in Egypt till the middle of the 10th century. Papyri vary in size and quality, those of Homer in the British Museum being about 10 in. in width and the hieratic charters 8 in. Tho

muscular and lages for Latin literature. Extant oxamples are the Sermons and Epistles of St. Augustine (6th and 7th centuries), the Antiquities of Josephus (7th century), the MSS. of Hilary (6th century), and the register of the church of Ravenna (10th century). The Merovingian kings used It for state documents, and a few papal bulls on the samo material have been preserved. The greater durability of vellum ensured its complete substitution for papyrus in the later middle ages, and skins were pre-eminently the material for the literature of the Christian Church. Vellum was, however, frequently used as early as the 4th eentury, though palmographers are unable to agree on the dato when MSS, were first inscribed in gold or silver on purple stained vellum. Excellent examples of these are the Latin Psalter of St. Germain (570 A.D) and Codex Argenteus, containing Ulfila's translation of the Gothlo Gospels (6th century), the Evangelistarlum of Charlemagno (8th eentury). The use of paper for MSS. was introduced to Europe from the East through the Arabs and Moors, an early extant example of a MS. on oriental paper being a charter of Frederic II. to the nuns of Goess (1228).

Early MSS, are not distinguishpariy M.S. are not distinguishable from books. The codex or caudex and the papyrus roll (Gk. βιβλος, a book, was dorived from βιβλος, papyrus, and the corresponding Lat. liber from the bark of the lime tree commonly used for MSS.) were equally MSS. and books. It may he said that the modern distinction dates rather from the abandonment of the roll form for the familiar book-shape in the middle ages. the carliest MSS. the text was written form were used for correspondence, continuously across the face of the legal documents, accounts, or other leaf, though the columnar form was more usual in papyri. For palimpsest (i.e. MSS. scraped so as to allow the leaves to he used again), see Palimp gether by rings. A few Greek tablets sesr. Consult Thompson's Greek and

Manutius Aldus, or Manuzio Aldo nifying native or indigenous), the (c. 1450-1515), an Italian printer and name given to themselves by the inauthor, horn at Sermoneta, in the papal states. He spent some time in the study of the classics, subsequently becoming tutor to the princes of Carpi, one of whom, Alberta, sup-plied him with the money for starting his printing press. At Venico in 1490 he produced editions of Museus's Hero and Leander and the Greek Psalter. These were followed by tho works of Aristotie, Aristophanes, Thucydides, Sophoeles, Herodotus, Xenophon, Euripides, Demosthenes, Plato, and Pindar, as well as some editions of Latin authors. Ho is famous as having been the first to print Greek books and to use italics on a large scale, and was the founder of the Aldine Press.

Manych, or Manytch, a riv. bed of Russia, between the Don and the Caspian Sea. It is dry for a great part

of the year.

Manzanares: 1. A tn. of Spain in the prov. of Ciudad Real, 70 m. from Toledo. It has manufactures of soap, cloth, and pottery, and an active trade in wheat, wine, and saffron. Pop. 11,500. 2. A riv. of spain in New Castile, with a length of about 50 m. It flows from the Pice de Peñaiara past Madrid to the Jarama.

Manzanita, or Arctostaphylos manzanita, a beautifui Californian tree of the order Ericacea, ailied to the British bearherries. It varies from 20 to 60 ft. in height, and its wood

resembles mahogany

Manzoni, Alessandro (1784-1873), manzon, Alessandro (1784-1873), Italian novelist, horn at Millan in 1806, at the age of twenty-one, his essay on poetry entitied *Verst Sciolti* was inspired by the death of Carlo Imbonati, an intimate family friend; and in 1810 his sacred lyrics met with general admiration. Several tracedies written with much sairt tragedies, written with much spirit and originality, attracted notice not only in Italy hut in Franco and Germany, and foremost among the warm many, and foremost among the warm admirers and favourable critics of M. stood Goethe. The work, however, by which M. attained to European fame is his historical novel, I Promessi Sposi, a Milanese story of the 17th ceutury (3 vols., Milan, 1827). M.'s ode to Napoleon (1823) is noble in thought, and diction. The not's leter thought and diction. The poet's later years were spent in strict and devout seclusion, the free tendency of his early opinions having been succeeded by a stringent conformity to the doctrines of Rome. An edition of M.'s works, in 5 vols., was published by Tommasco in Florence (1828-29).

Mao, the cap. of Kanem dist.. 31 m. N.E. of Lake Chad, Shari ter., French

Congo, Africa. Maoris (a New Zealand word sig-

habitants of New Zealand. The M., in common with the natives generally of Polynesia, belong to the Malay race or family of mankind. Though calling themselves indigenous, the M. have a traditic-

to the the isla

ago. This island has been identified with Hawaii and Savaii in the Pacific The skin of the M. is in general of an olive-brown colour, hut there are some in whom the shade is much lighter, while in others it is darker. In stature they almost equal Englishmen, and have a powerful muscular development. They have well-shaped, intellectual heads, and their features, when not tattooed, might almost be taken for European. Few of them have beards or whiskers. The women arcofiess stature than the men in proportion, and are in other respects inferior to them. Both sexes used to practise tattooing, a custom which has been almost abandoned since the conversion of the M. to Christianity. Another very remarkable custom among the M. was that of the taboo, by which the priest could make certain persons and things sacred and inviolate. Cannibalism, a much more heinous and abominable oustom, was universally prevalent among the M. before their conversion to Christianity. The last instance of it occurred in the year 1843. Infanticide, which also prevailed largely among them in their days of beetherules is now universally and the characteristics. days of heathenism, is now universally aholished, and the same is the case with slavery and polygamy. The wars of the M. were formerly earried on with spears and clubs of various kinds manufactured from stone and wood. Their most remarkable weapon was a spear of nephrite, which descended among the principal chiefs from father to son, and was regarded as a kind of sceptre, and even a sacred object. The language of the M., like generally,

ily. Seven are spoken among them. The language is represented as rich and sonorous, well adapted for poetical expression. The M. have an abundance of metrical proverbs, legends, and traditions, of which a collection has been made hy Sir George Grey (Maori Sayings and Proverbs, 1867). They are also passionately attached to music and song. More than five-sixths of the M. are now converted to Christianity. Since the native wars, which lasted from 1843 to 1869, the M. have enjoyed complete peace, but they steadily declined in numbers from about 100,000

to 40,000 in 1901. decade, however, they have increased, and their number may now be put

at ahout 48,000.

Map (or Mapes), Walter (fl. 1200), a mediaval author and wit, probably a native of Herefordshire. He studied under Girard la Pucelle at Paris, and on his return to England was made clerk of the royal household, being frequently employed as a justice itinerant. He was with Henry II. at Limoges in 1173, and in Anjon in 1183, and in 1179 was sent to the Lateran Council at Rome. In 1176 he received the prebend of Mapesbury at St. Paul's, becoming before 1186 chan-cellor of Lincoln, and in 1197 he was made Archdeacon of Oxford. wrote De Nugis Curialium, a collection of legends and ancedotes from his native country. This book gives his native country. This book gives some information of the Templars and Hospitaliers, and also contains a sketch of the English court and kings from the reign of William II, to his Besides this, it gives an account of M.'s life. He prohably was also author of some of the satirical Goliardio verse as well as of a large part of Lancelot, and specimens of his wit are preserved by Giraldus Cambrensis.

Maple, or Acer, a genus of deciduous trees of the order Sapindacea, with opposite, stalked, palmately veined leaves of great decorative value, and racemes of green flowers followed by two-winged samaras. The common or small-leaved M. (A. campestre), has the racemes creet, and is the only British species, but the greater M., or sycamore (A. pseudo-platanus) with pendulous racemes is now perfectly naturalised. Of the numerous N. American species, the sugar M. (A. saccharinum) is one of the movaluable. M. wood has many uses. most

Maps. A map is the delineation of a part or the whole of the spherical surface of the earth on a plane, and represents the relative position of tho countries, mountain ranges, rivors, etc. This representation is towns, effected by means of projection, owing

Various modes o

been devised, of v projection is supposed to pass through the centro of the earth and tho kind tion of the eye. In the orthographic the cyo is at an infinite distance from the cyo is at an infinite distance from the centre of the earth, so that all drow M. according rays of light proceeding from it are graphic projection.

During the last parallel and perpendicular. mode, though representing accurately the centre of the hemisphore, is no good for the parts near the circumference, which is delineation become crowded together, and Is therefore seldom used except for M. of the moon. In the second, or stereographic, the eye is supposed to be on the surface of the sphere opposite to the one to be delincated, in such a position that if the globe were transparent, the eye would see the opposite concave surface. This again is not much employed, because it contracts the centre of the M. The third, or globular, the one generally adopted is a modification of the two. In this projection the oye is supposed to be vertically over the centre of the plano of projection, and at a distance from the surface of the sphere equal to the sinc of 45° of one of its great circles. All meridians and parallels in this projection are, in reality, elliptical curves; but as they are very nearly circular arcs, they are generally represented as such. The fourth, or conical projection, is used for representations of parts of the earth, for a portloa of a sphero hetween two parallels not very får distant from each other corrosponds very nearly to a like coaleat zone; hence small portions of the earth can be delineated more accu-rately by conical projection. In all rately by conical projection. four of these projections, the direction of the N. and S., or of the E. and W., is represented by a curved line, so that the course of a vessel on such a M. would always be laid down by a curve, which could only be described by continually laying off from the meridian a line at an anglo equal to that made with the meridian by the point of the compass at which the ship was sailing. If a vessel were to steer in a direct N.E. course by one of the previous projections, she would describe a spiral. The mariner, there-fore, requires a M. which will enable him to steer his course by straight lines, and this is supplied by Mereator's chart, a cylindrical projection in which all the meridians are straight enected by means of projection, owing when an the incremental are structured to the fact that it is extremely difficult to make a plan on a plane surface which indicates the positions and dimensions of the positions of the posi hough the aucleat Greeks Anaximander (560 n.c.) the the orthographic, the stereographic, inventor, traces have been found of the globular, the conical, and Merca-tor's. In the first three the plane of before that date. These were, of course, very crude, but as time went on they gradually improved in character, in 310 n.c. attempts at projection were made by Diemerchus of

Messana, and Ptolemy (fl. 126-61 A.D.) drow M. according to the sterco-graphic projection. Years later the

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Maranhão 83

much towards improving cartography. and Sebastian Cabot (1544) produced his M. of the world. These develop-ments have steadily increased, until in our own times excellent M. are available for all classes.

Maqui, or Aristotelia Maqui, an evergreen shrub with handsomo foliage and green flowers, followed by black berries, used in Chili as a

febrifuge.

Mar, the name of an old Scotch district in the S. of the co. of Aber-deen. It lies between the rivers Don and Dee, and is divided into Cromar,

and Dee, and is divided into Cromar, Braemar, and Midmar.

Mar, John, eleventh Earl of (1675-1752), famed as the leader of the 1715 rebellion. He continually changed sldes politically, being in turn Wbig and Tory as it was advantageons to him. As a Whig he assisted in the union of Scotland and England. Beaus of his continual charge of sides oause of his continual change of sides he heeame known ss. Bobbing John. he heeame known as 'Bobbing John.' After the union with Scotland, and on the overthrow of the Whig government, he again became a Tory, and was made Sceretary of State for Scotland. Later, on the accession of George I., he again endeavoured to keep his position by changing sides, but failing on this occasion to obtain but failing on this occasion to obtain favour, he lost his office. This so angered and disgraced him that he returned to Scotland and started tho rebellion at Braemar, and soon had a large and enthusiastic following. His fielde character, however, again showed itself in his hesitanoy, and his long delay in the Highlands enabled the Duke of Argyll to check him when he finally advanced at the battle of Stirling. He then gradually retreated and escaped with the Pretender to France. He was a favourite of the Pretender, and when arrested in Geneva, he purchased freedom and the possession of his estates by betraying James. He never afterwards held the confidence of anybody, but continued in his treachery by still professing to be Jacobite, and continuing to betray secrets to the Eng-

lish government.

Marabou, or Leptoptilus marabou, a seavenging bird of the stork family, somewhat larger than the adjutant (L. argala), and found in Central Africa. The vent feathers, also called M., were formerly in very considerable demand for millinery and also

for searves.

Germans, Italians, and Dutch, did spiritual superiority over the Moslem negroes of Barbary.

Marabrun, a Gascon poet and troubadour of the 12th century. According to tradition, he was a found-ling discovered and brought up by Andric del Vilar, and was assassinated by an enemy. His most famous poems are in praise of the crusades:

Aujatz de Chan, 1135; Pax in nomine Domini, 1137

Maracaibo, a fortified city of Vene-

zuola, S. América, situated on a sandy plain on the W. shore of the strait which connects the Lake of Maracaibo with the gulf of the same name. It is tho chief town of a province of the same name. It is a handsome town, with a hot but healthy climate. There

is trade in sugar, coffee, coeoa, and rubber. Pop. 50,000.

Maracaibo, Lake and Gulf. The Lako of M., in the N. of Venezuela, is about 100 m. in length and 70 m. in hreadth. A bar at its mouth pro-hibits the ontrance of large vessels. hibits the entrance of large vessels. It is connected with the gulf of the same name by a strait 20 m. in length, and from 5 to 10 m. in breadth. The gulf is a wide inlet of the Caribbean Sea, 150 m. from E. to W., and about 75 m. from N. to S. Maracci, Lodovic (1612-1700), an Orientalist, born at Lueca, Italy. He became professor of Arabic at Rome. became professor of Arabic at Rome, where he gained the favour of Pope Innocent XI. He published an edition of the Koran, with notes, and a Life of Mahmet.

of Mahomet. oy manomet.
Maragha, a city of Azerbaijan,
Persia, 50 m. S. of Tabriz, enclosed
by walls. The tomb of Genghis Khan
is here, and an observatory was
founded on an adjacent mountain by
his grandson, Hulsgu Khan. M. is
noted for its fine marble. Pop. 15,000.
Maragogipe, a tn. of Brazil in Bahia
state, at the head of All Saints' Box

state, at the head of All Saints' Bay, 25 m. S.W. of Caehoeira. A variety of coffee is named after it. Pop. about

15,000.

Marajo, an island in S. America, in the Atlantic Ocean, off the N. coast of Brazil, 180 m. long and 120 m. broad. Surface is marshy in parts.

Maramaros, Szigot, a tn. in Hungary, cap. of co. Maramaros, 215 m. E.N.E. of Budapest on the Theiss at the foot of the Carpathians. It is a centre of the lumber trade, and the depot of sale united in the vicinity.

Pop. 18,000.

Maranhāo, or Maranham, a mari-time prov. of N.E. Brazil. A large part of the surface is covered by forests, but the river valleys and coastal districts are very fertile, profor searves.

Marabouts, a class of religious saints or sorcerers among the Berbers of N. Africa, held in high esteem. They held Spain and Morocco for a considerable period. Tho Almohads put an end to their temporal dominion, but thoy continued to exercise time prov. of N.E. Brazil. A large prov. of N.E. de Maranhão, is a prosperous, well ing part in the struggle between the built city on an island of the same Jacobins and the Girondists. He Area 177,569 sq. m. 499,308.

Marano di Napoli, a com. in the prov. of Naples, Italy, 5 m. N.W. of Naples. Pop. 8600.

Marañon, see AMAZON. Marans, the chief tn. of Charente-Inférieure, France, 18 m. from La Rochello, on the Sèvro Niortaise. It is in the midst of marshy land inter-sected hy canals. It is a seaport, and has an important trade in grain and cattle. Pop. 8013.

Maranta, a geaus of perennials (order Scitaminacem), with tuberous or creeping rhizomes, from which arrowroot is obtained, and ornamental leaves, green ahove and grey, purple, or rose below.

Maraschino, a liqueur, distilled from a small hlack variety of wild cherry found chiefly round Zara in Dalmatla and Corsica. An inferior

variety is made in Germany.

Marash, the chief tn. of the sanjak of Marash, in the Aleppo vilayet, Turkey in Asia, E. of the Jihan R., at the foot of Mt. Taurus. There is a large trade ia Kurd carpets and cm-broiderles. The name 'Marasi' is found in Assyrian inscriptions, and the town, under the name of Ger-manicia-Marasion, played an im-portant part in Byzantine history. Pop. 50,000.

Marasmius, a genus of fungi, characterised among its allies by assuming the original form when moistened after being dried. M. oreades, the champigaon or fairy-ring fungus, ls delicately flavoured and wholesome.

Marat, Jean Paul (1743-93), a Freach revolutionary leader, son of Jean Paul M., a native of Cagliari. In 1759 M. went to Bordeaux for two years to study medicine. Bordeaux he went to Paris, from there to Holland, and finally to London, where he practised his profession as a physician; his special study being diseases of the eyes. His other chief interest was the study of electricity. In 1773 ho wrote his Philosephical Essay on Man, and in 1774 ho published The Chains of Slavery. In 1775 ho was made an M.D. of St. Andrews. He was now famous as a Additions. He was now failtons as a skilled physician, and the year 1777 saw him as the brevet physician to the Comte d'Artels guards. In 1789 he published his first journal, L'Ami du Peuple, and gradually left his capatilla life and straight for a religious. scientific life and studies for a political career. In 1789 he was arrested and suffered a month's imprisonment. In Jan. 1790 he fled to London, but returned to Paris and hid in foul cellars, where he coatracted a leathsome and painful skin disease. He took a lead-

Pop. called himself the martyr of liberty, and after being tried and acquitted by the

came: \mathbf{Paris} declar

de la one of those who were implacable towards the king, and demanded his death for the good of the people. The skin disease from which he suffered was so painful that only by lying in warm baths could be obtain relief. While sitting in his bath writing his journal, a young woman, Charlotte Corday (q.v.), demanded admittance. The girl was a Girondist and an enthusiast, and helieving him to he a monster of bloodthirstiness, she stabbed him through the heart, convinced she had rid Franco of a terrible enemy. Sa E. B. Bax, J. P. Marat, 1900; A. Vermorel, J. P. Marat, 1880.

Maratea, a tn. of the Neapelitan province of Basilicata, situated on the slope of a mountain in the midof a lovely and salubrious country.

Pop. 8000.

Marathas, so Min ther a Marathan, at her like co Greec, in Attlea, on Trations oveen the mountains and the more st, about 20 m. W. of Attage, at 2 mountains. mountains and the chiefs, according to the monstrous bull by Theseus, and in his tory for the victory of the Atlenia.

Mittlades, over the Persians, 490 B.C.

Marathon Raco, the name given to the Olympio games held every four years at the capital of the country closen to hold them. The name is also used for similar races held elsewhere, The race is at the Stadium, etc.

usually over a course of 25 m. Maratti. Carlo (1625-1713), Maratti, Italian painter and ongraver, born at Camerano. His Madonnas were particularly numerous and admired. He was entrusted by Clement XI, with the charge and restoration of the frescoes of Raphael in the Vatican and was commissioned by Louis XIV to paint his celebrated picture of Daphoro. Fuseli considered his Daphoro.' Fuseli considered his Bathshoba vlowed by David' his greatest work. Ho died at Rome.

Marattia, a genus of large tropical ferns, the fleshy orowns of which are cooked and eaten. The feather-shaped fronds are 8 to 12 ft. long.

Maravedi, an old Spanish celo in use until the end of the 18th century. Originally the name was used for Moorish coins, both silver and gold, but after 1494 it was only used for a small coppor coin, in value about centimes (id.), and a sliver coia (lid.)

Marazion, a fishing vil. in the St. ship of Essex co., Massachusetts, ves parliamentary div. of Cornwall, U.S.A., 16 m. N.E. of Boston, on mount's Bay, 2 m. E. of Massachusetts Bay. It has a good on Mount's Bay, 2 m. E. of At low tido it is united to

ant by a causeway of 1911) 1251.

(d. 1585), an English rganist and musical composer. He ook a leading part in a society ormed at Windsor to promote the pread of Reform doctrines, and arrowly escaped the stake. He comlosed the first book of chants for use n the Angliean Church, Booke of

Common Praier Noted, 1550.

Marbella, a tn. in the prov. of Jalaga, Spain, on the Mediterranean, io m. S.W. of Malaga. It has iron nines and foundries lu the nclghbour-100d, and exports salt fish, figs, and rine. Pop. 10,000.

Marble, a crystallino form of limetone. The term is usually a hose forms of limestone or

vhich are sufficiently compac high polish. A characteristic M. oneists of manulas of uniform sizo

When broken

i multitude of distening facets, owing to the granules reaking along their rhombohedral leavage planes. The colour is usually white, but markings of many hucs and patterns are produced by the presence of metallic salts, either as constituents of the original limestone, or as later

Tho mctamestones. been brought about by

id press by tho nood of igneous intr

that streaks or bands of impurities in he original limostone frequently take on peculiar shapes. The economic importance of Ms. is derived from tho adaptability of the finer forms to uses in statuary, and of the other forms to nore or less ornamental architecture. Many fine Ms. were known to the incients. of which Pentelic the Venus de Mediei was carved in stone from this source. The M. used by mediæval and modern sculptors is that found in the neighbourhood of Carrara in Italy. Architectural Ms. quarried from the Devonian system in Devon, while the mountain imestone of Yorkshire and Derbythire yields a stone capable of a high

harbour, and some shipbuilding in-dustry. It was settled in 1629 by English immigrants. Pop. (1910) 7001.

Marburg: 1. A town in Styria, Austria, 41 m. S. of Graz by rail. It has a large trade in leather, boots and

shoes, iron and "sparkling wines

tn. in the pro.
Prussia, cap. of the dist. of Cassel, on the R. Lahn, 60 m. N. of Frankfort by rail. The chief buildings are the 'Elisabethankirehe,' built in 1235-S3, to contain the tomb of St. Elizabeth of Hungary; the university, founded in 1527. There are manufs.

of pottery, leather, iron goods and surgical instruments. Pop. 21,869. Marcantonio, or Marcantonio Rai

the 15th Bologna. *oldsmith

and engraver at Bologna, undor Francia. From 1510 until the taking of Rome by the Spaniards (1527) he lived there, engraving many of the best pictures of Raphaci and his pupils.

Marcaria, a com. in the prov. of Mantua, Italy, 13 m. S.W. of Mantua. Pop. 8500.

Marcasite, a mineral consisting of iron disulphido (FeS₂). It is thus chemically identical with iron pyrites, and was formerly looked upon as a variety of pyrites. It has a different

structure, developing crystals, while pyrites the cubic system. M.

pressure is the result brown, has a brilliant masses. Much erush taken place, so specific gravity of 4.8. It is found in more recent formations than pyrites, and like that mineral is liable to be converted into limonite. It is mined at Littmitz near Carlsbad, and is used for the preparation of sulphur and ferrous sulphate.

beture. | Marceau, François Séverin Des-to the graviers (1769-96), a French general, and born at Chartres. He took part in the Parian Ms. are the most famous. The attack on the Bastille (1791), in the former was obtained from Mt. defence of Verdun (1792), and in the Pentelleus in Attiea, and served as Vendée, and commanded at Flourus the material for the Elgin Ms., now (1794). He was in command of the odged in the British Museum. Parian first division of the army of the M. was quarried in the idea of Paros; Rhine, and tought at Lahn and at Altenkirchen where he was mortally

wounded (Sept. 1796). Marcello, Benedetto (1686-1739), an Italian musical composer and author, born at Venice. While holding various official positions he devoted himself to music and poetry. His master-plece is the Estro poetico-armonico (1724), a musical setting of the first fifty psalms as paraphrased into Markielicad, a scaport and town- Italian by G. Giustiniani. He also

wrote cantatas and an opera. His pamphlet, Il Teatro alla moda, was a brilliant satire on contemporary opera.

Marcellus, Marcus Claudius: 1. A Roman general (c. 268-208 B.C.) dur-ing the second Punic War. In 222 B.C.

the Insubrian Gauls, whose spoils he afterwards dedicated as spolia opima in the temple of Jupiter Feretrius. This was the third and last time in Roman history that this offering was made. In 214 he began a famous siege of Syraeuse, which he finally took in 212. On the capture of the eity Archimedes, who directed tho engines which defended the town, was put to death by the Roman soldiers. In 208 he was killed in a skirmish with Hannihal near Venusia. 2. Another Roman of the same name (c. 43-23 B.C.), was the son of C. Marcellus and Octavia, sister of Augustus. In 25 B.C. he was adopted by the emperor and married his daughter, Julia. 23 B.c. Marcellus died suddenly at Baire, supposedly poisoned by Livia, to the grief of Augustus.

Marcellus, the name of two popes: Marcellus I. succeeded Marcellinus probably in May 308. He imposed such severe penances upon all Christians who had recanted under the recent persecutions that he was banished by popular demand in 309.

Marcellus II. succeeded Julius III.

in 1555, hut died the same year. As Cardinal Cervini he presided over the Council of Trent. Palestrina dedicated

a famous Mass to him.

Marcet, Jane (1769-1858), an English authoress, born at Geneva. She spent her early life there, marrying a Genovan doctor, but later settled in London. Sho published Conversa-tions on Chemistry; Conversations in Political Economy, and other similar Children.

the first month of the Roman year, and the third according to our present calendar, consists of Marchie 31 days. It was considered as the Hainaut, first month of the year ln England until the chango of style in 1752, and the legal year was reekoned from the 25th March. T

it Hlyd monoi

horrowing three days from April.

March, in music is, as its name indicates, a musical composition intended to regulate the step of marching troops. Written in common time and not too slow, it should have the and not too slow, it should have all panied in his campaign against rhythm sufficiently clear and well panied in his campaign against marked to make the march of the Genseric, king of the Vandais lo Africa in 431, and under Ardaburius.

March, a tn. in the Isle of Ely, Cambridgeshire, with a market on Friday. It is situated on the Nee, 81 m. N. of London. It manufactures a considerable variety of farm tools and has engineering works. (1911) 8403.

March, Agnes, Countess of, see

BLACK AGNES.

March, Ausias (d. c. 1459), a Cata-lan poet, born in Valenela. His poems which show the influonce of Petrarch when show the influence of retarion were written in the dialect of Catalonia, and testify to the vivid imagication of the writer. His chief works are: Cants d'Amor; Cants de Mort, and others may he found in various editions, among them that of F. P. Briz (Barcelona), 1864. Marchantia, the typical genus of a tribe and order of Liverworts, which

frequent damp places.

Marchena, a tn. in the prov. of Seville, Spain, 30 m. E. of Seville. It is an old Moorish town, some of the fortifications still remaining. also has sulphur springs. 12,500.

Marches, a compartimento of Italy, comprising the provs. of Pesaro o Urhino, Macerata, Ascoli-Piceno, and Ancona. This region produces wice, silk, coreals. Before the year 1860 these states were included in the territory of the pope. Area 3750 sq. m. Pop. about 1,100,000.

Marches, Riding the, see BOUNDS.

BEATING THE.

Marchetti, Filippo (1831-1902), an Italian composer, a nativo of Bolog-nola. In 1881 he became director of the St. Ceelila Academy, Rome. His chief works are: Romeo e Giuliella, 1865; produced in Milan, Ruy Blas, 1869, and Gustave Wosa, 1875.

Marchfold, a plain in Austria,

Marchfold, a plain in Austria, stretching in a northorly direction from Yienna, and in a westerly one from the March. This was tho seeno manuals; also Stories for Very Little of the defeat of Ottokar of Bavaria by Rudolph of Hapsburg in 1278, and also of the battles of Aspern and Wagram fought in Napoleon's time.

Marchienne - au - Pont, a tn. in Hainaut, Belglum, 2 m. Charlerol, on the Sambre. found hero. Pop. 20,000. m. of Coal is

Marchin, a tn. of Belglum, prov. of 16 m. E. of Namur. Pop.

6000.

is a proverb which represents M. as horrowing three days from April. March, in music is, as its name indicates, a musical composition in-

Marcianus (A.D. 450-457), Emperor of the East, born about 391. He entored the army at an early ago, and

He seems to have acquired great and England across the English h of the Channel. In 1901 signals were re-

> d II*

(456), he also refused payment of tribute to Attila, reformed the finances, and repeopled the devastated districts.

Marcianus, Ælius, a Roman jurist, who wrote after the death of Septimus Severus. His chief works are sixteen books of *Institutiones*; two books on *Publica Indicia*; two books on *Appellationes*; and five books entitled Regularia.

Marcinelle, a tn. in Hainaut, Belgium, 24 m. S.E. of Mons. It manufs. steel goods, and has collieries. Pop.

16,000.

Marcion, founder of the Marcionites, an ascetic Gnostic sect, was the son of a bishop of Sinope in Pontus. Being excommunicated by his father, on account of his heretical opinions, he went to Rome about 140 a.D. He went to Rome about 140 A.D. made several anxious efforts to obtain a reconciliation with the Catholic After his final excommunication, he associated himself with the Syrian Gnostie Cerdon. The gospel of Christ, according to him, consisted in free love of the Good; the Mosaic system, with its motives of rewards and punishments, was mere legality (See Gnostics). M. entirely rejected the Old Testament; and of the New Testament, all but a few Epistles and the Gospel of St. Luke.

Marcomanni, a powerful league of borderers belonging to the Germanic tribe, who dwelt between the Danube and the Rhine after Cresar's death. Under their king, Marobodus, they made themselves masters of the kingdom of Bojenheim, the present Bohemia. They subsequently made incursions into Roman territory dur-

ing the reign of Marcus Aurelius, until 180 A.D., when peace was pur-ohased by Commodus.

Marconi, Guglielmo (b. 1874), Hon.
D.Sc., Oxford; and Hon. Li.D.,
Classows 1904; an electrical excises. Glasgow, 1904; an electrical engineer, born at Bologna, Italy, on April 25 (hismother being an Irish woman), and married in 1905 to Beatrice O'Brien, daughter of the fourteenth Baron Inchiquin. Ho was oducated first at Leghorn, Italy, under Professor Rosa, and then at Bologna University. After a series of experiments in wireless telegraphy at Bologna, he conducted a successful test in England

and Egypt (452), and quelled dis- and formally inaugurated between turbances on the Armenian frontier Canada (Capo Breten) and England, when the Governor-General of Canada and Sr. M. transmitted messages to King Edward VII. Communications were next established between Cape Cod, Massachusetts, and Cornwall. With the extension of M.'s system of wireless telegraphy to the ocean liners the first ocean daily newspaper, the Cunard Daily Bulletin, was unugu-rated on R.M.S. Campania in 1904. His system is now used by Lloyds and the principal shipping companies in England and abroad, as well as being adopted by the British and The principal Italian admiralties. warships of these navies are now fully equipped, as well as ships of the mercantile marine. Public wireless services have been established between Bari (Italy) and Antivari (Montenegro), and between England and America. M. has received many honours. In 1902 he was created by the King of Italy Commander of the Order of St. Maurice and St. Lazarus, and received the Grand Cross of the Order of the Crown of Italy. He reorder of the Crown of 16013. As re-ectived the freedom of the city of Rome in 1903, and was decorated with the Order of St. Anne by the Tsar of Russia. In 1909 ho was awarded half the Nobel Prize for Physics, Stockholm. Marco Polo, ste Polo, MARCO.

Marcq-en-Barœul, a tn. in the dept. of Nord, France, 3 m. N. of Lille. Pop. 11,500.

Marcus, Aurelius, see Aurelius, Marcus Antonius. Marcy, Mount, sec ADIRONDACK

Marczaly, a com. of Hungary, 98 m.

S.W. of Budapest, near the E. shore of Lake Balaton. Pop. 44,000.
Mardin, a tn. in the vilayet of Diarbekir, Asiatic Turkey, 54 m. S.E. of Diarbekir. It has a picturesque position on the side of a hill, and is the headquarters of an Ameri-

and is the leadquarters of a American mission. Pop. 25,000.

Mardonius (Gk. Μαρδόνος), a Persian general, the son of Gobryas. He was sent by Darius in 492 B.C. to complete the settlement of Ionia, and to punish Eretria and Athens for their there is the very lateral reference. share in the war, but being unfortunate enough to lose his fleet off Mt.
Athos and to suffer a defeat at the hands of the Brygians, he was com-

I to return to Asia, and was cenby the king who deprived him command. On the succession chief Instigators of the expedition against Greece. After the defeat of Salamis ho persuaded Xcrxes to return home, and heing left in command of 300,000 men, sent a proposal to the Athenians to withdraw from the Greek confederacy, and on their refusal occupied the city and reduced lt to ruins. He next marched against the Greek force which was collected at the Isthmus of Corinth, and followlng It to Piateea, was defeated and slain in 479 B.C.

Mareb, a tn. of Yemen, Arabia. 80 m. N.E. of Sana. It is a town of great antiquity, Its original name

being Saha.

Maree Loch, in Ross-shire, Scotland, a large and heautiful lake, 2½ m. long hy ½ to 2 m. broad. It is surrounded by gorgeous mountain gorgeous scenery, and studded with Islands. It is drained by the R. Ewo in Loch Ewe.

Maremma, a marshy region of Central Italy, in the S. part of Tuseany, oxtending along the coast of the

oxtending along the coast of the Tyrrhenian Sea. Formerly it was densely populated, but it is now practically all desert land.

Marengo: 1. A vil. of Piedmont, Italy, situated about 2 m. S.E. of Alessandria. It was the seene of Napoleon's victory over the Austrians in 1800. 2. A tn. of Algeria, 38 m. W.S.W. of Algiers. Pop. (com.) 6000.

Marennes, a scaport of France in the dept. of Charente-Inférioure, 25 m. S. of La Rochelle. It has a large pro-

duction of oysters, and salt-works. Pop. (com.) about 6500.

Marenzio, Luca (c. 1555-99), an Italian composer, horn at Coccagllo, close to Brescia. He occupied for time the position of maestro to Car Poland and was employed by Sigistrained possession of the throne of mund III. About the year 1595, sweden. She combined Denmark, however, he returned to Rome and became organist at the possession of the throne of Sweden, and Norway Into one kingbecame organist at the pontifical His greatest successes in chapei. music were due to his having perfeeted the madrigal.

Mareotis, Lake, see BIRKET-EL-MARIUT.

Mare's-tail, or *Hippuris*, a genus glabrous aquatic herbs (order aloragaceæ). Tho only British Haloragacere). species, H. vulgaris, occurs in ditches and stagnant water, and has an un-branched jointed stem about 9 in. high, bearing whorls of six, eight, or ten ilnear leaves with hard tips. Minute inconspicuous flowers occur in the axils of the upper leaves. Ms. are sometimes planted hesido ornamental waters.

Mareuil, Arnaut do, scc ARNAUT DE

MAREUIL.

of Xerxes in 485, however, he was French physiologist, a native of again in favour, and was one of the Beaune, Côte-d'Or. Ahout 1869 he hecame a professor of the Collège de France in Paris, and was also a member of the Institutand of the Academy of Medicine. He spent a great deal of his time on the study of physlological movements. Among his works are: Du mouvement dans les Fonctions de la vie, 1868; La Ma-chine animale, locomotion terrestre el aérienne, 1873; Physiologie du mourement le vol des Oiseaux, 1890.

Margaree, a post vil. of Canada, Inverness co., Cape Breton Is., 30 m. N.N.W. of Sydney. It is at the mouth of a harbour in Margarce R. in the Gulf of St. Lawrence. Pop. 3000. Margaret, St. (d. 1093), a sister of

Edgar Atheling. On the accession of William the Conqueror to the English throne Edgar Atheling, his mother, and his sisters Margaret and Chris-tina, went to Scotland, and M. bo-came the wife of Malcolm III. of Scotland. She did much to reform the manners and customs of the people, and was devoted to her husband in his work. Maleolm, enraged at the seizure of Carlislo by the English, laid siege to Alnwick (1993), and was de-feated and slain. M. died when she heard the news of her husband's death.

death.

Margaret (1353-1412), Queon of Denmark, Norway, and Sweden, and daughter of Valdemar IV. of Denmark. At the ago of ten she was married to King Haakon VI. of Norway, and on his death in 1380 the whole of Norway was placed in her hands. Her son, Olaf, whose election as king of Denmark she had procured, died sevon years later, thus the story of the throne to the specific death.

fter she defeated

dom, and was called the 'Semiramis

of the North. Margaret Margaret of Anjou (1430-82), daughter of René the Good of Anjou, titular king of Naples, Anjou, married to Henry VI. of England in 1445. Sho became regeut for her husband because of his imbeelilty, and her power being contested by the Duke of York and claimant to the throne, led to the Wars of the Roses. Although successful at some of the battles, sho was in the end defeated at Tewkesbury and taken prisoner with her son, who was killed, M. herself being imprisoned for four years. See Oman's Political History of England (vol. lv.), 1906. Margaret of Naverre (1492-1549)

(also known as Margaret of Au-

Marey, Etienne Jules (1830-1904), a goulemo), a sister of Francis I. of

France; married to the Duke of stomach finely cut up aids in separat-Alencon in 1509 and to Henry ing the fat from other tissue. The d'Albert, titular king of Navarre, in fat is allowed to cool to 24° C. and is 1527. She nover reigned at Navarre, but kept a court at Nérac. She afforded protection to the Protestant

Margaret of Parma (1522-86), an illegitimate daughter of the Emperor Charles V., first married to Alexander, Duko of Florence (1533) and then to Ottavio Farnese, Duke of Parma (1542). From 1559-67 she was regent of the Netherlands.

of the Netherlands.

Margaret of Scotland (c. 1425-45), long and from 5 to 20 m. broad.

eldest child of James I. of Scotland | The name derived from the pearls and wife of the Dauphin Loui | The name derived from the pearls wards Louis XI., whom she i antities.

Tours in 1436. He dislik | but the pearls and she dev good deal of her time to poetry, cotton, coffee, sugar, etc. It was diswitting wards and she like She covered by Columbus in 143 Cap. writing rondcaux, and such like. She

is said to have been a pupli of Alain

is said to have been a pupli of Alain Chartier. See Jusserand's English Essays from a French Pen, 1898.

Margaret of Valois (1553-1615), a daughter of Henry II. of Franco and Catherine of Medici, married in 1572 to Henry of Navarre. On the massacre of St. Bartholomew, Henry fled from eourt and was not rejoined by his wife for six years. Later, she again abandoned him, and was finally divorced in 1599. Her Memoirs were published in 1628 published in 1628.

Margaretsville, a seaport tn. of Nova Scotia, on the Bay of Fundy, 8 m. N.E. of Wilmot. Pop. 1500. Margaret Tudor (1489 - 1541), a daughter of Henry VII., and wife of James IV. of Scotland, whom she married at Edinburgh in 1503, and the whole of her subsequent life was a series of political intrigues of one kind or another. Sho had three children by James, two sons, one of whom, later, became James V. of Scotland, and a daughter Margaret, mother of Lord Darnley. Her greatgrandson, James VI. of Scotland, succeeded Elizabeth as James I. of England.

Margaric Acld, a fatty acid prepared artificially. Its formula is C₁,H₃,COOH, so that it stands between palmitic and stearic acids in the fatty acid scries. The compound is not found in nature, but the name was formerly given to a substance which is now known to be a mixturo

of palmitic and steario acids.

Margarine, artificial butter. There are various methods of preparing oldzko. Pop. 5366.

Margarine, artificial butter. There are various methods of preparing oldzko. Pop. 5368.

Margaraf, Andreas Sigismund (1709-suct of good quality is freed from membrane by melting ont the fat; Strassburg, and medicine at Halle, the addition of a quantity of sheep's In 1738 he was elected to the Berlin

then subjected to considerable pressure, with the result that it separates into solid stearin and liquid oleoreformers, and was a patroness of margarine. The latter cools to a mass, art and literature. A collection of her poems appeared in 1547. See Freer, of butter, but it is usually mixed with Life of Marquerite d'Angoulême, 1895. consistency and with anatto for purposes of colouring. Most of the M. manufactured is a wholesome and Most of the M. nutritious substitute for butter. See ADULTERATION.

Margarita Island, in the Caribbean Sea, belonging to Venezuela, 45 m. long and from 5 to 20 m. broad.

covered by Columbus in 1498. Cap. Asuncion. Pop. about 40,000.

Margaritone d'Arezzo (c. 1215-92),

margaritone d'Arezzo (c. 1215-92), a painter, seulptor, and architet, born at D'Arezzo, celebrated in his day. The best known of his paintings is his 'Madonna, with Scenes from the Lives of the Saints' now in the National Gallery. He also painted a 'Coronation of the Virgin' in the Liverpool Institute. See Vasari. Liverpool Institute. Lives of the Painters.

Margary, Augustus Raymond (1846-75), an Angio-Indian traveller, son of an English officer, born at Belgaum, Bombay, and educated in France and at University College, London. In 1867 he went to China as a studentinterpreter and travelled across S.W. China to meet a Christian mission from Burma, being murdered by the Chinese at Manwein on returning.

Margate, a seaport and municipal bor, in the Isle of Thanet, Kent, a few miles from the N. Foreland, and one of the most popular seaside resorts of Engiand, 74 m. E. by S. of London. It has bracing air, excellent sands, and bathing facilities, and a few size and icttr. Dos. (1911) fino pier and jetty. Pop. (1911) 27,086. Margaux, a tn. of France in the

dept. of Gironde, noted for its Medoe Bordeaux is 15 m. N.W. Pop. 2000.

Margay (Felis tigrina), a species of tiger-cat about the same size as the domestic cat, native of the forests of Brazil and Guiana.

Academy of Sciences, in 1760 heing simpler phraseology the outlay be appointed director of the physics you which a consumer will not go. class. He is noted for his discovery Margrave (Ger. Markgraf, count of of sugar in heetroot. His papers were eollected into two volumes Chymische Sehriflen (1761-67).

Margilan, or Marghilan, a tn. in Russiau Central Asia, cap. of Fergana prov., 160 m. S.E. of Tashkend. It is

in a licalthy position, surrounded by Alexander of

industries are silkworm culture, and the manuf. of silk, woollen, and eamel-wool cloths.

Pop. 43.000. Margin: 1. In business generally.-(a) In a transaction in which money is advanced on security the difference between the amount advanced on the

security and the market value of such As regards trustees mortgaging the property of their heneilciaries the effect of the Trustee Act, 1893, is that a trustee must not lend than two-thirds of the survevor's valuation even if the surveyor advises that a greater proportion may be advanced. If he does he will be liable for any resulting loss: but this statutory precaution relates not to the trustco w speculativ

factory, o prohabiy of the proportion to value advanced. | des Christlichen Moral; (b) In banking practice the M. de-pends on the nature of the thing charged or pledged, but may be said to fluctuate from 10 up to 25 per cent. (e) In 'cover' transactions (see Cover), COVER), or speculation upon through outsido stockhrokers, the speculator deposits a certain M. or sum to cover prospectivo differences in price, which cover is said to run off if the difference turns out to he

greater than he anticipated. In economics.—In the Ricardian

theory of rent that land which will just pay for cultivation if it he let at a nominal rent, is said to ho the M. of cultivation, and in the absence of exceptional elreumstances land below that M. cannot be cultivated with profit. In regard to labour generally, there is a 'final' or marginal disability when the increment of ntility from the given employment just given employment just the increment of pain balances the increment of palm (Jevons). In other words if the physical and meatal disadvantages ust outweigh the reward, no one will be found regards used by grave's

eured by a unit of money, or in spondance, 1887.

Economy,

Margrave (Ger. Markgraf, count of the mark), formerly a governor en-trusted with the care of a 'mark,' or frontier (margravate), who stood immediately under the king or em-

as th 12th

and later a M. held the same rank as a prince of the empire.

Marguerite, a general term for a number of daisy-like flowers. The common ox-cycedaisy (Chrysanthemum leucanthemum) and the grand ox-cyc (C. uglinosum) are often so called; but the name specially applies to C. frutescens, the Paris daisy, with fine white or yellow flowers. The hlue M.

is Agathaa coclestis Marheineke, Philipp Coarad (1780-1846), a German theologian, horn at Hlidcsheim, Hanover. Ho heeam university preacher at Erlangen in 1804, and professor in 1806. He was also professor at Heidelberg in 1807 and professor and preacher at Berlin in 1811, where he became acquainted with Hegel, Schleiermacher, and Neander. He represented orthodox nature, but apparently only to the Hegelianism, viz. panthelsm masvalue of the security, and hence a querading as Christianity, and wrote i cthics, and

orks include istlichen Dog-Geschichte System de Catholicismus, Geschichte der Deut-

On his death sho became regent for their daughter, Isahelia II. In 1810 sho was forced to abdicate in coasequence of Carlist disturbances, and fied to France, where she lived for the greater part of her life.

Maria Christina (b. 1858), consort of Alfouso XII. of Spain, and born of the Austrian royal family. Sho acted as queen-regent during the minority of her son, who became king under the title of Alfonso XIII. in 1902.

Maria Louisa (1791-1847), daugister of Francis I. of Austria, and second wife of Napoleon Boaaparte, whom she married in 1810 on the divorce of Josephine. She had one son, called the king of Rome, with whom she lived at Schönbrun whilst Napoleon was in exile. In 1814 she was appointed ruler of the duchles of Parma, Piacenza and Guastalla by the Allies. See Life by Helfert, 1873; Mémoires by Mine. Durand, 1885; and Corre-

Mariana, Juan de (1536-1623), a ished, the national revenues greatly Spanish historian, born in Talavera, increased, and the burdens were He entered the order of Jesuits and subsequently taught in the schools of subsequently taught in the schools of this order in Rome, Sicily, Paris, and Toledo. As a writer ho appears to have incurred odium with different parties. His treatise, Dc Rege ct Regis Institutione, was held to favour the doctrine of tyrannicide; De Pon-deribus et Mensuris was aimed at the malversations of the Duke of Lerma, this caused him to be imprisoned; De Morte et Immortalitate was consured by the ecclesiastics; Historiae de Rebus Hispaniae (20 vols.), his masterpiece, was written in Latin (1592); a Spanish edition appeared in 1609. Consult Garzon's El Padre Mariana, 1888.

Marianna, an episcopal tn. of Minas Geraes, Brazil, 170 m. N.W. of Rio de Janciro. Pop. 6000.

Marianne Islands, see Ladrones.
Marianne Comenso, a com, in the
prov. of Como, Italy, 8 m. S.E. of
Como; has an important silk industry. Pop. 5126.

Marianthus, a genus of shrubs (order Pittosporacea), sometimes grown on trellises in greenhouses. They bear showy panicles of red or greyish-blue flowers.

Marianus Seotus: 1. (1028-82), Irish chronicler. He became a Benedictine monk, entered the monastery of St.

monic, entered the monastery of St. Martin at Cologne in 1058, passing his later life at the abboys of Fulda and of Mainz. He left a Chronicon Universale, first printed at Basle in 1559. 2. (d. 1088) A famous copyist and abbot of St. Peter's, Regensburg. Maria Theresa (1717-80), Empress of Germany, the daughter of the Emperor Rarl VI., was born at Vienna. By the Pragmatic Sauction (q.v.) her father appointed her heir to his hereditary thrones. In 1736 sho married Francis Stephen, Grand Duke of Tuscany, to whom she gave Duke of Tuscany, to whom she gave an equal share in the government an equal share in the government when sho became queen of Hungary, of Bobemia, and archduchess of Austria, on the death of bor father, Oct. 21, 1740. Prussia, Bavaria, Saxony, Naples, and Sardinia, stirred up by France, put forward claims to portions of her dominions, chiefly founded on the extinction of the male iine of the house of Hapsburg. The War of the Austrian Succession, after lasting more than seven years, terminated in her favour by the peace of Aix-la-Chapelle in 1743. She lost only Silesia and Glatz, and the duohies of Parma, Piacenza, and Guastalla, whilst, on the other hand, by her hyphydrysa sleated amparage. minated in her favour by the peace of Aix-la-Chapelle in 1748. She lost only Silesia and Glatz, and the duchies of Parma, Piacenza, and duchies of Parma, Piacenza, and Guastalla, whilst, on the other hand, her husband was elected emperor. During the time of peace, she made great financial reforms; agriculture, and commerce flourgreat financial reforms; agriculture, Anna Bick manufactures, and commerce flour- (1909), etc

increased, and the burdens were diminished. She found in Kaunitz (q.v.) a minister possessed of the wisdom and energy requisite for the conduct of affairs, and in him she placed almost unlimited confidence. The Soven Years' War (q.v.) between Austria and Prussia again reduced Austria to a state of great exhaustion. Sbe joined with Russia and Prussia, in the partition of a third part of Poland (1772). Galicia and Lodol'oland (1772). Galicia and Lodo-meria were added to her dominions at this time. Sho also compelled the Porto to give up Bukowina to her (1777). The Bayarian War of Succession ended in her acquisition of the Innthal, but led to the formation of the Furstenbund (q.v.). Consuit J. F. Bright's Maria Theresa, 1897.

Mariazeli, a tn. of Styria, Anstria, 60 m. S.W. of Vienna. Its shrine of the Virgin is the object of a popular

pilgrimage. Near is a large iron foundry. Pop. 1500.
Maribo, the chief tri. of the Isle of

Ladland prov. Denmark, 15 m. N.W. of Nykjöbing. Pop. 3874.
Maribojo, or Maribojoc, a tn. on the island of Bohoi, Philippino Islands; exports tobacco and sugar. Pop. 12,000.

Mariea, a genus of perennials (order Iridaceæ) with showy but short-lived flowers, grown in stovehouses and greenhouses, in pots, or on rockeries.

greenhouses, in pots, or on rockeries. Mariea, a tn. in the prov. of Rio de Janeiro, Brazil, on the shore of a coastal lagoon, 21 m. E. of Rio de Janeiro; has rice, maize, sugar, and manico. Pop. 6000.

Marie Antoinette, Josephe Jeanne (1755-93), wife of Louis XVI. of France. She was the fourth daughter of Maria Theresa and of the Emperor Francis I.. and was born at Vienna. of Maria Theresa and of the Emperor Francis I., and was born at Vicuna. She married the Dauphin of France, afterwards King Louis XVI., in 1770, but her unconventional behaviour and her extravagance made her very unpopular. On the accession of her husband to the throne (1774), her Austrian sympathies and her opposition to the demands of the popular party increased her unpopularity. At the outbreak of the Revolution she showed indomitable courage. She was hampered by her weak and vacillating husband, as well as by her own self-will and inability to understand the point of view of her enemies. She was guillotined on

Marie de France, a French poetess of the 12th century. She translated into French, from an English version, 103 animal fables under the title Ysopet in octosyllable couplets. She dedicated them to 'Count William, Identified with William Longsword of Salisbury. Her other poems are twelve Breton Lais, also in octosyllabic verse, and a long poem on the purgatory of St. Patrick. The Lais are delightfully fresh and graceful, the ohief being Le Rossignol, Chevrefeuille, Eliduc, and Milun. The best edition of the Lais is that of Karl Warnke (1885), and of the lays and fables together, Roquefort (2 vols., 1820). See Eng. trans. by Edith Rickert (1901), and paraphrase of Mr. O'Sbaughnessy (1872). Marie de'

Medici (1573-1642), a daughter of Francis of Tuscany, and Queen-consort of France, born at Florence. In 1600 sile was married to Henry IV. of France, and her eldest son, later Louis XIII., was born in the following year. After Henry's assassination in 1610, she became regent, and was entirely under the influence of her Italian favourites, Leonora Galigal and her husband, Coneini, who was oreated Marquis d'Ancre. In 1614 sho was compelled to buy the submission of the discontented nobles, but in 1616 Louis XIII., prompted by Richelieu, asserted himself, ordered the assassination of the Concinis, and virtually Queen consort of France, born at sination of the Concinis, and virtually imprisoned the queen at Blols. In 1619 she escaped and headed a new rovolt, but was reconciled to her son through the mediation of Richelleu. Her attempts to displace Richelicu led to her exile to Complègne in 1630, whence she escaped to Brussels in 1631, and later to Cologno. Seo Life by Miss J. S. H. Pardoe, 1852; A. P. Lord, The Regency of Marie de' Médicis, 1904; and L. Batlffol's La Vie intime d'une reine de France (Eng. trans.), 1908.

Mario Galante, one of the islands of the West Indies, belonging to the French, 18 m. S.E. of Guadeloupe, being a dependency of the latter. Its chlet productious are coffee, cottou, and sugar. Its area is about 58 sq. m. and its chief ta. Grand-Bourg. Pop. 15.000.

Marienbad, a watering-place Boliemia, Austria, 40 m. N.W. of Pilsen. It has a beautiful position among forest-clad hills, and possesses cold saline and chalybeate springs. It exports large quantities of salt. a watering-place It dates from 1808.

Pop. 6279. Marienberg, a tn. of Saxony, Germany, 17 m. S.S.E. of Chemnitz, and noted for its lace manufs. Silver is found hero. Pop. 7763.

Marienburg, a tn. in W. Prussia, 27 m. S.E. of Danzig. It was origin. ally the seat of the grand masters of the Teutonic knights. The manufs. include machinery and flour.

14,025 Mariondorf, a tn. in Brandenburg, Prussia, in the dist. of Potsdam, 4 m.

S. of Berlin. Pop. 15,388

Marienwerder, a tn. in the prov. of W. Prussia, near the Vistula, 45 m. S.S.E. of Danzig. It possesses 45 m. S.S.E. of Dange. A founded in 1233 by the Teutonic Order of Knights It has sugar refinerles, and manufs. machinery. Pop. 12,982.

Marietta: 1. The co. scat of Washington co., Obio, U.S.A., on the Ohio R., 50 m. S.E. of Zancsyille. It manufs. flour, furniture, and lumberproducts, and produces coal, iron, and petroleum. Pop. (1910) 12,923. 2. The co. seat of Cobb co., Georgia, U.S.A., 18 m. N.W. of Atlanta. The people are engaged in the raising of stock and in various manufs. Pop. (1910) 5949.

Mariette, François Auguste Fer-dinand (1821-81), a French Egypto-logist, born at Boulogne. In 1839 he was in England as a drawing master; in 1841 he became professor at his old college at Boulogne. His connec-tion with Mestor l'Hote directed his interest to Egyptology, and in 1847 ho published a Catalogue analytique of the Egyptolan gallery at Boulogne. In 1849 he was assistant in the Egyptian department of the Louvre; in 1850 he went to Egypt in search of Coptio MSS. and discovered the Serapeum and the catacombs of the Apis bulls. In 1858 he became keeper of the Egyptian department and decrease the Egyptian department and decrease the Egyptian department and decrease the Egyptian manupours and decrease the Egyptian Egyptian manupours and decrease the Egyptian of the Egyptian monuments and devoted himself to archeological exploration of the Nile valley. Ho published : Le Sérapéum de Memphis, 1857; Dendérah; Abydos; Karnak; Deir-el-Bahari, 1877; Apercu de l'histoire d'Egypte; Itinéraire de la $oldsymbol{H}$ aute Eaypte.

Marigliano, a tn. of Caserta prov., Italy, 12 m. from Naples. It has a castle. Mariglianella village is 1 m. distant. Pop. (com.) 12,500. Marignac, Jean Charles Galissarà de (1817-94), a Swiss chemist; studied at the Ecolo Polytechnique, Paris (1838) and then at the Ecole des Mines (1837-39). He worked with Libelia at (1837-39). Ho worked with Lloblg at Glessen (1840), and then became professor at Geneva Academy (1841-78). Ho discovered the true nature of ozone, and did much research work for determining the atomic weights of the various elements. M. pald much attention to 'rare cartis,' discovering ytterbia (1878), gadolinia, and gamaria (1880). Ho settled the question of the composition of silicle acid (1858), and investigated the

GOLD.

Marignano, see MELEGNANO.

Mariinsk, or Marinsk, a dist. and tn. of Tomsk gov., W. Siheria, Russla, on the Trans-Siberian Railway. It is a gold-mining centre. Pop. (town) 9500.

Marikanve, Lake, the largest artificial expanse of water in India, in N. Mysore. It is 35 sq. m. in area, the water being used for irrigation and power plant, and was finished in 1908.

Marin, a tn. of Pontevedra prov., Galicia, Spain, 5 m. S.W. of Ponte-yedra on a bay of the Atlantic. Pop. 9000.

Marin, Le, a tn. on S. coast of Martinique, W. Indies, 28 m. N.E. of Fort do Franco. The extinct volcano of Marin is near. Pop. 5000.

Marinduque, an island of the Philippines, S. of Luzon, N.E. of Mindoro. Boag (N.W.) is the chief town. The port Marlanga is on the S.E. Rice, hemp, and cocoanuts are produced. Pop. 50,000.

Marine Engine, see STEAM ENGINE.

Marine Insurance, see Insurance.

Mariner's Compass, see Compass. Marines are soldiers that serve on board ships of war. The men are drilled in all respects as soldiers (light infantry), and therefore on shore are simply ordinary land-forecs. On board ship, they are trained to sea-On board ship, they are trained to seamen's duties, hut still preserving to a Strage degli innocenti, 1633; their military organisation. Their Lattere. ., 1627. Ziardini edited nordinary functions are as sbarpshoters in time of action, and at other times to furnish sentrics for (1625), Loredano (1633), Camola guarding the stores, gangways, etc. (1625), Loredano (1633), Camola guarding the stores, gangways, etc. (1633), Poppe (1771), Menghin (1888), They are useful as exercise control over the less rigidly.

control over the less rigidly sailors; and having alway and bayonets ready, they heen instrumental in supp

> of artillery. rchased, hut ughout the fficers corre-'s of similar

nature and process of solution. See commissioned, has her complement of Cleve's memorial lecture in Journal M. drafted into her. The uniform is of the London Chemical Society, 1895. red, with hlue facings and white beits. On their colours. the men Marigold, a name for several proudly bear the word Gibraltar, in flowering plants. The French, African, the famous defence of which fortress and Mexican Ms. (Tagetes) are value they here an heroic part. M. were able half-hardy garden plants. Seeds and half-hardy garden plants, seems have established as a mustary norm are usually sown under glass in whence to obtain seamen to man the March and planted out at the end of May. The colours vary from pale 1664. Their utility hecoming conlemen to brown, and bloom all the spicuous, other regiments of marine summer if faded flowers are removed. forces were raised, so that by 1741 See Calendula and Marsh Mari- there were 10,000 men, and in 1759 as many as 18,000 men. During the great French war the number rose above 30,000 men, but a great reduction took place after peace was concluded. The government of M. rests solely with the Board of Admiralty.

Marinette, a eo. and elty of Wis-eonsin, U.S.A., eo. seat of Marinette co., on the Menominee, 20 m. from Oconto. Lumbering is the chief in-dustry. There are paper, pulp, and flour mills, machine and agricultural implement works. Bridges connect implement works. Bridges connect it with Menominee, Michigan. Pop. (1910) 14,610.

Marinha-Grande, a tn. of Estremadura prov., Portugal, 5 m. from Leiria, with noted glass manufs. It has a pine forest, 'Pinhal de Leiria.' Pop. 5000.

Marini (or Marine), Giovanni Bat-tista (Giambattista) (1569-1625), an Italian poet of Naples, a friend of Tasso. Ho was founder of a some-Tasso. Ho was founded on style, what lahoured and affected style, marred by conceits and extravagant metaphors, to which the name 'Marinismo' was given. His works were much admired by contemporaries throughout Europe, and he received a pension from somets, Murioléide, was collection of sonnets, Murioléide of Murioléide); Sismondi, Lit. of S. tobbing, Lives of the

of Italy, on the Alban S.E. of Rome, in the neen instrumental in supplies that outbreaks of mutiny. The Royal prov. of Rome; noted for wine. It was formerly a stronghold of the Orsini and of the Colonna (12th to rehased, but 15th century). Pop. 8000.

Mario, Giuseppe, Cavaliere di Candia (c. 1810-83), an Italian singer, the s of similar greatest operatio tenor of his time. ority; as a For a short time he studied under hetween the Ponchard, Michelet, and Bordogni, of infantry making his début at the Paris Opera p, on being in Robert le Diable, 1838, and appearand was

ing in London (1839) in Lucrezia, Marion: 1. Cap. of Grant co., Borgia. He left the opera in Marion co. Natural Théatre-Italien (1840), to:

In Marion co. Natural Russia (1845-50), and in arc found. There are (1854). M. played in the operas of machine shops, and manufs. of 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, 1860, Rossini, F

the most M, sang v

Mariolatry (Gk. Mapia and λατρέια, adoration), the worship of the Virgin Mary. This term is chiefly used by polemical writers as one of disapproval, to express the veneration paid to the Virgin, and to statues and pictures of her in the Roman Catholic and Eastern churches. Controversialists deciare that the supreme worship of λατρέια is accorded to her, while all devout Catholies maintain that it is only the highest veneration or 'hyperdulia' (ὑπερδουλέια), and that prayers to her, such as the 'Ave Maria' so constantly used, are but potitions imploring her interession with Christ for sinners. The invocation of the Virgin and the Saints does not appear to have been common in the earliest ages of Christlanity, possibly from fear of re-introducing polyheating notions among the recent theistic notions among the recent converts from paganism. The epithet Ocoroco? ('Mother of God') was probably first applied to Mary by Alexandrian theologians in the 3rd century. Epiphanius in the 4th centhe views of the law of gases, known in Franco as Collyridians who worshipped Mary Mariotte's law. He was noted for (sco Haer., 79). The Nesterian move-his discoveries in hydrodynamics. ment was a protest against the title Traité du movrement des caux...
Ocordos, which was, however, appeared in 1686. His Collected
solemnly affirmed by the Ceumenical Works were published in 1717 and
Council of Ephesus (431). After this 1740. See Conderect, Eloges des the full development of the system of Académiciens. M., so obnoxious to Protestant consults by which the name of M. is troversialiste, soon followed. Under known to a reader of modern works Pius IX. the 'Immacianto Concept are the following: 1. He was the distion' of Mary was declared to be an coverer of that law of clastic fluids article of faith (1854). Among the which now goes by his name; that is, chief festivals in ber honour observed of the elastic force being exactly in by Catbolics are the erse proportion of the space s), the Annunciation given mass of fluid occupies. Conception (Dec. 8), (Cundlemas, Feb. 2), (Aug. 15), some datir century. The Reform century. The Reform the fundamental parts of century protested against M., and it is acrostatics. 2. He discovered that air, condemned in the 22nd Article of the lind air in a state of condeusation. Church of England, and in the West-exists in liquids. 3. He found that the minster Confession (c):

Maria Virginis, 1866.

aper, and rubber. Pop. (1910)
2. Cap. of Marion co., Ohio,
45 m. N.W. of Columbus. It
ailway centre and manus. the married (c. 1844), for many years. He retired from the stage in 1867. See Blinds, etc. Its lime and stono in Baker, Biog. Dict. of Musicians; dustries are noted. Pop. (1910) Rearse and Herd, The Romance of a 18,232. 3. Cap. of Williamson co., Great Singer, 1910. Missourl. Pop. (1910) 7093.

Marionettes, little jointed puppets of wood or cardboard, representing men and women, and moved by means of cords or springs by a concealed agent. They are exhibited in what are called marionetto theatres, the exhibiter varying his voice, so that a sort of dramatic performance is accomplished. This entertainment was known to the Greeks, and from them passed to the Romans. In modern times, it has ehicfly prevailed in France and Italy, and has there reached a very respectable degree of artistic perfection.

(c. 1620·84). Mariotte, Edmė (c. 1620-84), a French mathematician and physicist, or whose life little is known. Ho was horn in Burgundy, was a priest by profession, and resided in early life at Dijon. He was one of the earliest French experimental philosophers, and a member of the Académie des Sciences (founded 1666). His chief work, De la Nature de l'Air (1679) contains a statement of Boyic's law' of casses known in France as The principal

> to such aiterations as differ-* temperature may require, the derived from this law is now

minster Coufession (cin. xxi. 2). See part of the retina in which it meets Northeote, Celebrated Sanctuaries of the optio nerve is not capable of couthe Madonna, 1868; Rudniki, Die voying the impression of sight-berütmtesten Wallfahrtsorte der Erde, Among minor matters we may men 1891; Pusoy, Eirenicon; Bourassé, tion the now common guiuea and Sumno Aurea de Laudibus Bealæ feather experiment, which ho first made with the air-pump.

Mariposa (Sp., hutterfly), a co. of while the office of marischal fell into Central California, U.S.A., containing the Yosemite valley and the Mambroth Tree Grove with its famous Frederick the Great. See Buehan sequolas (S. giganta). The Sierra Ancient and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Marian and Noble Family of Keith, Nevada horders it on the N.E. Minimum of Cap. Maripo gold is produced. Cap. Ma 137 m. from San Francisco.

in the frontiers of France and Araly, extending from the Col dil Tenda (N.W. of the Gulf of Genoa). N.W. to the Col de l'Argentière and Alps of Dauphiné. E. and N.E. come most famous. Matthijs studied at the academies of the Haguo and Antwerp, and in Paris after 1869. His works are remarkable for tender colonring and poetle feeling, and include, 'Souvenir d'Amsterdam,' The Little Daughter of the Artist-Swan,' 'A Fairy Tale,' 'Mädchen mit Tauhen,' 'Hausliche Geschäfte.' Jakoh is especially noted as a land-cscape painter of water, clouds, and misty skies. He was a pupil of De Keyser and Van Lerius at Antwerp, and then of Hébert in Paris (1866-71). His works include: 'Holländische Staddansicht,' 1878, 'Am Meeresufer,' 'Souvenir of Dordrecht,' 'Grey Tower, old Amsterdam,' 'The seaweed Gatherers,' 'The Bahy and the Kitten,' 1877, 'A Village Scene,' See Jan Veth in Onze Kunst, 1902; de Beck, Leben, 1904. Willem profered the hright, cheerful aspects of nature. His works include: 'Watende Kühe,' 'Enten,' 'Ein Sommertag,' Influenced by the Baralzon school, they in their turn influenced the growth of the Glasgow school. See 7" 'Peintres hollandias mo?' Roose's Dutch Police Century, 1300. Peintres hollandais modernes, 1893; Roose's Dutch Painters of the 19th Century, 1899.

Marischal, Earl, a title created by James II. of Seotland (c. 1458), and bestowed on Sir William Keith. The Keith family since the time of David I. had possessed part of Keith in E. I. nad possessed part of Keuli in E. Lothlan. From the early 17th century the office of Great Marischal became hereditary in this family, being conferred as an honour hy Bruco for their services from Bannockburn (1314) onwards. George, fifth Earl (c. 1553-1623), founded Marischal College, Aberdeen (1593). William, seventh Earl (c. 1617-61), hecame head of the Northern Covenanters. He of the Northern Covenanters. He supported Charles II. (1650), but was E. taken prisoner at Alyth (1651). On Adr the Restoration (1660) he hecamo near keeper of the Great Seal. George, tenth Earl (c. 1693-1778), fought for nop the Pretender at Sheriffmuir (1715), ban and was in consequence attainted, Serbs.

of Eminent Eloge de

Anadyr are the chief rivers. The surface is mountainous, and covered with forest or tundra in the N. The inhabitants include Chukches, Koriaks, Tunguses, Yakuts, Russians, and half-breeds. The climate is severe. Furs (chiefly sables) and fish abound. Coal is found, and gold on the Amgun R. Stag's horns, seaweed, and mushrooms are exported. A railway runs from Khabarovsk (cap.) to Grafskaya and Vladivostok (cap. of S. Usuri dist.), the most important town. Area 720,000, sq. in. Pop. 270.000.

Maritza (ancient Hebrus), chief riv. of European Turkey, rising on the gola

Mariupol, a scaport of Ekaterino-slav gov., S. Russia, on the N. coast-of the Sea of Azov, 63 m. S.W. of Tagarrog. It has considerable coasting trade, and exports corn and other cereals, coal, steel, etc. There are flour mills, foundries, and tanneries. Pop. about 40,000.
Marius, Gaius (157–86 B.c.), a

Roman general, born near Arpinum, of humble origin, and was brought up to despise the new Greek culture then becoming so fashionable in Rome. He possessed the stern and severe virtues of an ancient Roman, and at first he was characterised by great integrity and industry, but living in a licentious ago his virtues scon degenerated into vices, and being without the tempering influence of literature and art, his sternness produced cruelty, and his love of country becamo love of self. He saw his first service in Spain (134) under the great Sciplo Africanus, who raised him to the rank of an officer, and in 119 B.C. was elected tribune, becoming prætor in 115, in which capacity he subdued Further Spain. He distinguished himself in the war with Jugurtba, 109-106, and wes elected consul for the first time in 107 (a great honour for a novus homo), finally with Sula bringing the war to a close. He was next appointed to the chief command against the Cimbri and Teutones, and defeated the invaders at Aquæ Sextim (102), and near Vercellæ on the Raudian plain (101), becoming consul for the fifth time the same yeor. In 100 hc was again consul, but he had secured his election by means of the demagogues, Saturninus and Glauela, and so had alienated the plebs. In consequence of this he went piens. In consequence of this he went to Asia, but returned to take part in the Social War of 90, and when Sulia was appointed chief in command against Mithridates in 88, succeeded in getting it transferred to himself. This led to an open rupture between the two generals which resulted in Sulla defeating M., who fled to the marshes of Minturine. He subsequently went to Carthage, and returning to Rome in Sulla's absence was a seventh time cleeted consul, but dled three weeks afterwards. M. was Marlyaux, Pierre Carlet de Cham-blain de (1688-1763), a French writer, born at Paris. He began his literary

work hy a parody on Homer, hat soon turned his attention to comedy and the nevel. His work is characterised by its verbal affectation, afterwards known as 'Marlvaudage,' and by its analysis of character. His works include: Morianne (his most famous novel), 1736-41; Les Faussesconfidence, 1733; See Gaston Deschamp's Maricaux, 1897.

M. (O majorana) are used for seasoning. Oil of M. is used in farriery, and a dyo is also obtained from the plant. Mark, a German geographical term, signified primarily the mork of a country's limbts (the morch); and hence was applied as a designation of the border countries or districts of the German empire, conquered from the Hungarians, Wendes, Siavonians, and other neighbouring nations. Thus, and other neighbouring nations. Thus, wo read of the Ms. of Austria, of Northern Saxony or Brandenburg, Lausatia, Slesrig, Moravia, Steiermark, etc. The governors entrusted with the charge of these border districts, or marks, were called morkgrafs, corresponding to the English and Scottish Wardens of the Marches (See Marches). The object mederness (see Marquis). Its chief modern use is as the name of a silver coln of Germany containing 100 pfeanige. Originally it was a measure of weight (chiefly for gold and silver) used throughout W. Europe, and equal to ahout 8 oz. In 1194, after the Conquest, a mark represented in England 160d. (20d. to 1 oz.), or 13s. 4d, 3 of £1. In Scotland it only had to of the English value. Ms. were first issued in Germany about 1875, There are gold 5, 10, and 20 mork pieces. The silver M. (4 thaier) is equivalent to 113d. (English), or 24 cents (Ameri-can), and weighs 77-16 grs. Troy. See Dn Cange, Gloss. Lat., 1678, under

Marca. Mark, or John Mark, the traditional author of the second gospel, is mentioned many times in the N.T., though nowhere by name in the Gospels. Ho is spoken of in Coll. iv. 10 as the cousin (δάνεψιός) of Barnabas. His mother Mary (Acts xii. 12) seems to have been a woman of some pesition whose house was a frequent resort of the Christians of Jerusalem. He accompanied Paul and Barnahas on their return from the visit to Judea (Acts xil. 25), and later set out with them on the first missloaary journey. On their arrival at Pergala Pamphylia ho left them for some unexplained and this defection reason, and this defection later caused a sharp dispute between Paul and Barnabas which led to their taking different roads. We next read of M. as reconciled to Paul, and as being with him at Rome (Coll. iv. 10, Plul. 24). Later he seems to have visited Asia (2 Tlm iv. 11). Tradition makes him the founder of the church in Alexandria, and later legead weaves many claherate myths around

Mark, The Gespel according to St., the second book of the N.T., is new

his name.

as the first of the gospels to be consigned to writing. Ecclosiastical tradition has held that St. Mark was Its author, in accordance with the testimony of Papias (2nd century), who says that St. Mark was the 'interpreter' of St. Peter, and that he wrote his gospel at Rome from in-formation derived from the apostlo. In the last century the Tübingen school entirely reversed the traditional view, and placed the second gospel later than the other two synoptio narratives, holding it to be an adaptation of these two works intended to remove all that could offend either of the two great parties of the Early Church which the Tübingen school postulated. This view may now be said to be entirely abandoned, and it may be considered as an ascertained fact of criticism that St. Mark's Gospel was used by St. Luke and the author of the first gospel. Harnack dates it between 65 and 70 A.D., so that the date offers no difficulty to accepting the traditional authorship, strengthened as its claim is by internal evidence. St. Mark's Gospel is characterised by great vividness of narrative, and a wealth of incidental detail. There is no attempt at a literary style, effect being gained mainly by the repetition of words and Either St. Mark's gospel or an earlier form of it was used in the compilation of both the other synoptic gospels. See Swetc's Commentary on St. Mark, 1902; Monzics, The Earliest Gospel, 1901; and article in Hastings' Dict. of the Bible, where full bibliography is given.

ANTONIUS. Mark Antony. sec

Marcus

Markby, Sir William (b. 1829), an English jurist, was educated at King Edward's School, Bury St. Edmunds, and Merton Collego, Oxford. He was called to the bar in 1856; was judge of the High Court, Calcutta, 1866-78; and reader in Indiau Law at Oxford, 1878-1900. He also dld some work in the W. Indies. The most important of his publications are: Lectures on Indian Law, and Elements of Law considered with Reference to General Principles of Jurisprudence. He has written for law magazines.

Market (from Lat. mercalus, trade). This word is used either of the fixed place to which purchasers and retail merchants resort for purposes of buyling and selling (such as Covent Garden M. for fruit and flowers, Leadenhall M. for meat and poultry, in London), or of a body of peoplo met together for commercial transactions such as the sale of provisions, very leave anciently, when shops live stock, etc., exposed in public, were very few, the general practice often at a fixed time and place. From was to sell and buy in markets and

almost universally regarded by critics learly times the right to establish a M. anywhere belonged to the orown, and the illegal assumption of M. rights was checked by Edward I.'s 'Quo Warranto' inquiries. The word was not commonly used in England before the 12th century. In the middle ages the term included weekly and semi-weekly Ms., and the annual mat of 'fair.' The London Stock Exchange

with numerous subdivisions (consols, foreign stock, mining, etc.) is an example of a highly organised М. Owing to modera facilities of inter-communication there is little variation in the price of a given com-modity at different places. See modity at different places. See Elton and Costelloe, Report for the Market Rights,

Life, il., 1894; litical Economy,

ch. 1v., 1010, Honley, Economic History, 1., 1894; Ellis, Rationale of Market Fluctuations, 1879; Emery,

Market Fundations, 1979; Emery, Speculation in . . U.S., 1896; Cournot, Recherches . . . 1838.

Market Bosworth, see Bosworth. Market Deeping, a market tu. of Lincolnshire, England, on the Welland, 7 m. E. by N. of Stamford. Pop. (1911) 1300.

Market Drayton, or Drayton-in-Hales, a market tn. of Shypnshire.

Hales, a market tn. of Shropshire, England, on the Shropshire Union Canal. It is an old town, and is in the centre of an agricultural region. Pop. (1911) 2800. Mark . I. and

nor. and market on the Unlon Canal. er. Tt. is a much frequented hunting centre. Corsets, patent foods, rubber goods,

and brushes are among its manufs.

It has an old Gothic church. Pop. (with Bowden) (1911) 8853.
Market Overt. The legal term M. O. or 'open market' is used in reference to the acquisition of a good title by the purchaser of goods where the seller's title was defective. The general rule is that the owner or his agent alone can sell so as to confer ownership, but among the various exceptions to this rule is the statu-tory provision (Sale of Goods Aot, 1893, founded on the common law) that where goods are sold in M. O., according to the usage of the particular market, the buyer acquires a good title to the goods provided he buys in good faith and without notice of any defect or want of title on the part of the seller. As a fact, the huyer

has no great protection, because:
(1) If the owner of stolen goods secures the conviction of the thief he gets his goods hack again; and

are now more or less the survivals of a bygone age. In the City of London, however, every shop which is open to the public between sunrise and sunset on all week days is, by customary law, M. O. (The Shops Act, 1912, in no way affects this custom, and a city shop is still M. O. though It must close long before sunset on one day in the week.) But city shops are only M. O. for such goods as the shop-keeper proposes to deal in, nor (apparently) does the custom apply where the shop-keeper is himself the buyer. Outside the city, certain days are set apart by grant, prescription, length of time, or custom in which at the particular town or village M.O. is held. The protection extends only to goods vendible in the market. The transaction, to be protected, must have begun and ended in M. O.; e.g. sale in a private room, or sale by sample where the bulk of the goods is transferred otherwise than openly, do not constitute sale in M. O. in markets in which tolls are payablo, the buyer to be protected must pay the tolls duo upon the sale. Tho doctrine of M. O., as applied to the sale of horses, is subject to the duo carrying out of the old formalities prescribed by Acts passed in the 16th See Pease and Chetty, The century. Law Relating to Markets and Fairs.

Market Weighton, a market th. of Lincolnshire, England, 13 m. N.E. of Lincoln. Pop. (1911) 2296.
Market Seighton, a market th. in the East Riding of Yorkshire, England, 19 m. E.S.E. of York. Pop. (1911) 4383.
Markitald a nor in the co. of

Markfield, a par. in the co. Leicestershire, England, sltuated about 7 m. W.N.W. of Leicester.

Pop. about 1500.

Markham, Mrs. (1780-1837), pseudonym of Elizabeth Penrose, daughter of Cartwright (1743-1823), inventor of the power-loom; married to the Rev. John Penrose in 1804. She is She is noted as a writer of history and other books for the young. The best known are: A History of England . . ., 1823; A History of France, 1828. Other works include: Amusements of Westernheath, or, Moral Stories for Children, 1824; A Visit to the Zoo-logical Gardens, 1829; Sermons for Children, 1837. See Siniles, A Publisher and his Friends, 1891; Boase and Courtney, Bibliotheca Cornubiensis, 1874-82.

Markham, Admiral Sir Hastings (b. 1841), a British admiral: entered the navy in 1856 and retired

fairs, the almost universal rule at the in 1906. He helped to suppress the present day is to buy in shops, and Taiping rebellion in China (1861-62), markets and fairs (apparently the served on Mediterrancan and Act includes 'fairs' or 'markets') Australian stations, and helped to Australian stations, and helped to put down 'labour traffic' in the South Sea Is. He commanded the Alert in the Arctic expedition (1875-76). M. was captain of the torpedo school at Portsmouth (1883-86), and commander-in-chlef at the (1901 - 4). He explored Hudson Holson Bay and other parts near. His works include: Cruise of the 'Rosario,' 1873; The Great Frozen Sea, 1877; Northward Ho! 1878; Life of J. Davis, 1882; Life of Sir J. Franklin, 1890; and contributions to various journals.

Markham, Sir Clements Robert (b. 1830), an English traveller and Robert geographer, educated at Cheam and Westminster. He was in the navy (1844-52), and served in the Arctic expedition (1850-51). He introduced quinine yielding einchona trees from Peru to British India (1859-62). M. was geographer to the Abysslnian expedition, became assistant-secretary to the India Office (1867-77), secretary to the Royal Geographical sceretary to the Royal Geographical Society (1863-88), president (1893-1805), and secretary to the Hakluyt Society (1858-87). Among his works are: Lives of Lord Fairfax (1870), Columbus, John Davis, Major Rennell, Admiral J. Markham, R. Hakluyt (1896), Sir L. M'Clintock (1909); Travels in Peru and India, 1862; Memoir on the Indian Surreys, 1871; The Threshold of the Unknown Region, 1874; Life of Richard III., 1906; Quichua Dictionary, 1908; and The Incas of Peru, 1910.

Markham, Gervase (Jervis) (c. 1568-1637), an English soldier and miscellaneous writer. During the Civil War he served in the Royalist army.

War he served in the Royalist army. Ho wrote the tragedy Herod and Antipater; Sir R. Grinvile, 1595; The Poem of Poems. ... Cavelarice ... 1607; Hunger's Prevention, 1621; and various works on sport. Biog.Dram. : Brydges. Baker's Censura Literaria, ii.

Markinch, a burgh in the co. of Fifeshire, Scotland, 11 m. S.W. of Cupar. The chief industries are bleaching the and manuf. of paper.

(1911) 1641.

Marking Ink, see Ink.
Markirch (Fr. Ste - Marie - aux - Mines), a tn. in Upper Alsace, Mines), a tn. in Upper Alsace, Germany, near the Leber. There is some mining carried on here, but the chief trade of the place is that done in textile fabrics. Pop. 11,778.

Markneukirchen, a tn. of Saxony, Germany, 28 m. S.S.W. of Zwickau. It is chiefly engaged in the manuf. of Saxony, Chiefly engaged in the manuf.

musical instruments. Pop. 8962. Markovka, a tn. in the gov. of

Kharkov. Pop. 8000.

Markranstadt, a tn. of Saxony, Germany, 7 m. S.W. of Leipzig. Pop. 8259. Saxony,

Mark System. The name applies to Mark System. The name applies to the agrarian polity, common to all ancient Teutonio races, by which the whole arable land of the community or settlement was annually or triennially allotted among the freemen, to he held till the time came for it to lie fallow, while the pasture land was both held and used in common. The M. S. as described in Tacitus is ovidently a sign of the transition between the nomadic and agricultural condition of tribes, or between a genuine community of land tenure, and an inchaste system of private ownership (Geffroy, Rome et les Barbares). The term 'mark' (in Tacitus vicus) in this context meant community, but its primary meaning boundary' points to the salient feature of the M. S. as described by Tacitus, namely the fact that the tribal habitations and fields were, for purposes of defence, bounded by huge unoccupied stretches of wasto land or 'marches.' Despite much controversy it seems probable that the M. S. preceded the feudal system, which overywhere reduced the freeman to a condition of scridom or villelnage. In England, at any rato, villelnage. In England, at any raw, the M. S. failed to take root with the migration of the Saxons (see Tenure). For the social, political, and judicial aspect of the M. S., see Kemble, Saxons in England; Stubbs, Const. Hist., vol. 1; G. L. von Maurer, Geschichte der Marken-verfassung, Deart Hot. Städle verfassung and also Dorf-Hof-Städle-verfassung, and also his Einleitung (new ed. 1896); Schmid, Gesetze der Angel-Sachsen; Maine's Village Communities.

Marktredwitz, a tn. in Upper Franconia, Bavaria, 23 m. E. of Bay-

Pop. 6636. reuth.

Mark Twain, see CLEMENS, SAMUEL

LANGHORNE.

Marl, a loose appellation for all compounds of clay and carbonate of lime, which are soft and friable. Shell M. is a soft, white, crumbling deposit formed on the bottom of lakes and ponds by the accumulation of the remains of mollusca, entomostraea, and partly of fresh-water algae. When such calcareous deposits agae. When such cancardous deposits become compact stone, they form what are known as 'fresh-water' or 'lacustrine' limestones, which are generally white or pale coloured, smooth in texture, rarely splintery, and which break with a slightly conchoidal fracture.

Kharkov, Russia, 150 m. E.S.E. of public buildings, carries on a con-Kharkov. Pop. 8000. siderable trade in boots and shoes. Pop. (1910) 14,579.

Marlborough: 1. A tn. in the co. of Wiltshire, England, 26 m. N.E. of Salisbury. It is an old town with interesting buildings, and its college was incorporated in 1845. It was here that Henry III. held the parliament which enacted the Statutes of Marlbridge, Pop. (1911) 4401. 2. A dist. in South Island, New Zealand, having an area of 4752 sq. m. The chief minerals found are gold, coal, and copper. Pop. 15,000. Marlborough, John Churchill, first Duke of (1650-1722), a soldier, was educated at St. Paul's School, and was for a while page to James, Duke of York. He entered the army in 1667 as ensign in the foot-guards, and, after sorving at Tangiers, was promoted captain (1672). In 1678 he became colonel, and in the same year married Sarah Jennings (1660-1744), maid of honour to Princes Anne, over whom sho had great influence. Ho was created Baron Churchill in 1682, and three years later took an active part in suppressing Mon-mouth's insurrection. For this service he was made major-general. he was made major-general at vowed fidelity to James II., and at the same time promised William of Orange to support him. When William landed, Churchill joined him. He was given an caridom in 1689, and after serving in Flanders, was in 1690 appointed commander-in-chief. the accession of Anne he was made captain-general of the forces and master-general of the ordnanco; and, on the declaration of war against on the declaration of war against France, commanded the forces in Holland. After the successful campaign of 1702, he was created duke. In the field he was almost invariably successful, and among his great victories were Ramillies (1706), Ouder 17702, and Mauleaut (1700). narde (1708), and Malplaquet (1709). In the meantime his influence at home was steadily waning, partly owing to changes in the political atmosphere and partly owing to the imperious behaviour of the Duches of Marlborough towards the Queen,

who in 1710 dismissed her from her service. Peaco was declared in 1711, and Marlborough, returning to England, was accused of malversation. and dismissed from all his offices. The

charges of peculation were, however, not proceeded with. He went abroad during the following year, and took an active part in securing the Hano-

verian succession. After the accession of Georgo I. he was reinstated as captain-general and master of the

Marlboro, a city in Middlesex co., ordnance, which offices he held until Massachusetts, U.S.A., 25 m. W. of his health gave way in 1716. A great Boston. This city, which has several and brilliant soldier, he was a

thoroughly unsernpulous man. played always for his own hand, and never hesitated to be treacherous if he saw that treachery was to his interest. He connected with both sides. and both sides cognetted with him, bnt no one who knew him ever trusted him, not even William III. nor George I. Tho standard hlography

of the Duke is by Coxe (1818-19). Marline-spike (from marline, small line of two strands for selzings. etc.), a wire pin used on board ship for unravelling the strands of a rope and as a lover in tying knots, etc.

Marlitt, E. (1825-87), the pseudo-nym of Eugenio John, a German novelist. She was for a time on the operatic stage, but hecame deaf and retired. After 1863 she wrote many romanees and novels, including Die gwölf Apostel, 1865; Goldelse; Blaubart; Das Geheimnis der allen Mam-sell, 1868; Thüringer Erzählungen. 1869; Heideprinzesschen. 1872; Die zweite Frau,

The 1879. journal Die

melien Romane und Novellen appeared 1888-90.

Marlow, or Great Marlow, a tn. in Buckinghamshire, England, on the Thames, 5 m. N.W. of Maidenbead. The river is crossed here by an iron snspension bridge. The chief manufs. are paper and lace. Pop. (1911)

Marlowe, Christopher (1564-93), a dramatist and poet, was the son of a shoemaker, and was educated at King's School, Canterbury, and Corpus Christi College, Cambridge. Presently he joined the Earl of Nothingham is the stated to the control of the tingham's theatrical company, hy which most of his plays were produced. Ho wrote about 1587 the great blank verso tragedy, Tamburlaine, and followed this with Dr. Faustus, The Jew of Malia, and Edward II. It been asserted by competent critics that he was part author of critics that he was part author of Shakespeare's Titus Andronicus, of the second and third parts of Henry FI., and of Educard III. There is no doubt, however, that his writings exercised much influence on Shakespeare. As a poet, he is best known as the author of 'Come live with me and be my love' (published in *The* Passionate Pilgrim, 1599). It was deelared that M. was an athoist, and in 1593 the Privy Council issued a warrant for him to be brought before them. Before it was served M. was killed by one Francis Aroher in a drunken brawl at Doptford. M.'s 'mighty line' was much appreciated by most of the eminent writors of his day, nearly all of whom, including Shakespeane, paid tribute to him. I was obliged to flee. On the outbreak He ranks with the greatest poets of of the revolution of 1830, at the head

He lany time, See Ingram's Marlowe and his Associates. 1904, and Verity's Marlowe's Influence on Shakesneare. An excellent edition of his works was published by A. H. Bullen In 1885.

Marmagao, a seaport tn. in the Portugueso territory of Goa, Indla. It is connected by rail with the Western Ghats, and is in the centre of a manganese and iron district.

Marmalade, see Jam.

Marmande, a tn., Lot-et-Garonne, France, on the Garonne, 30 m. N.W. of Agen. It manufs. cotton and woollen goods and brandy. 9800.

Marmier, Xavier (1809 - 92), a French author, born at Pontarlier. Early in life he developed a passion for travelling, and he visited Switzerland, Holland, Belgium, Germany, Russia, Africa, America, and the Northern Seas. His literary career began with the publication of a volume of poetry entitled Esquisses poétiques, 1830. His other works are: Lettres sur le Nord, 1840; Lettres sur la Russic, la Finlande et la Pologne, 1843; Lettres sur l'Amerique, 1852; Les Nouvelles du Nord, 1882; and Voyages et littérature, 1888. Ho also Ho also wrote two novels, entitled Les Fiancés du Gazida, 1860. Spitzberg, 1858. and

Marmont, Auguste Frédéric Louis Viesse de, Duke of Ragusa (1774-1852), Marshal of Franco, born 1852), Marshal of Franco, born at Chatillon-sur-Scine, entered the army at an early ago, served as a brigadier-general in Egypt, returned with Bonaparte to France, supported him in the revolution of the 18th Brumaire, and afterwards continued in active military service, Having Ragusan defended the territory against the Russians and Montenegrins, he was made Duke of Ragusa. He joined the great army in 1809, the day before the battle of Wagram, won the battle of Znaym, and was made a marshal. Hе was thereafter eighteen months governor of the Hilyrian provinces; and in 1811 suc-ceeded Massena in the chief command in Portugal, where he assumed the offensive, caused the slege of Badajoz to be raised, and kept Wellington in check for fifteen months. A wound compelled him to retire to France. In 1813, he commanded a corps d'armée, and fought at Lützen, Bautzen, and Dresden. He maintained the contest with great spirit in France in the not

cless

finally retreating with 6000 Swiss, and a few battalions that had continued faithful to Charles X., conducted bim across the frontier. From that time, heresided chiefly in Vienna. In 1852 he engaged in an effort for the fusion of the French Legitimists and Orleanists, but died at Venice on

March 2 of that year.
Marmontel, Jean François (1723-99), born at Bort in Limousin. At an carly age he became professor of philosophy at a seminary of the Bernardlns at Toulouse, and supported his mother and family after the death of his father. An acquaintance with Voltaire brought him to Paris in 1745. Voltairo introduced him to several persons of distinction, and the success of his first tragedy, Denys le Tyran, stamped him as a dramatic poet. His celebrated Conies Moraux, gained him great reputation. On the death of Duclos he became historiographer of France; and in 1783 he was made secretary to the Académic in the place of D'Alembert. He lost his appointments and his property on the breaking out of the Revolution, and he removed some distance from Paris in a state of destitution. In 1796 he be-camo a member of the National camo a member Institute, and in 1797 was elected into the council of the ancients, but this election having been reversed after the 18th Fructidor (Sept. 4), in the same year, he retired to Abbevilie, where he died and was buried.

Marmora, La, see La Marmora,

ALFONSO FERRERO.

Marmora, Sea of (ancient Pro-pontis), between Europe and Asia, connected with the Ægean Sea hy the Strait of the Dardanelles, and with the Black Sea by the Bosphorus. Its length is 175 m. and its greatest breadth about 50 m., while in some parts it is over 4000 ft. deep. Among the islands in this sea is that of Marmora, celebrated for its marble quarries.

Marmosets, or Ouistitis (Hapalidæ), a family of S. American monkcys, sometimes ealled bear - monkeys (Arctopithecini) from their somewhat bear like extremities, the feet having paws and claws which are necessary for the M's maiuly insectivorous habits. The face is short, and the thirty-two teeth include only two molars on each side. The tail is not prehensile. M. are all arboreal in hahit, climbing and jumping with great activity. They are not very intelligent, but their gontleness and pretty appearance make them interesting pets. The common M. (H. jacchus) is about the size of a squirrel, with dealight hours, for any Lorge

of a body of troops, he endeavoured bushy tail marked with alternate to reduce Paris to submission, and rings of black and grey. The side of rings of black and grey. The side of the head bears a long tuft of whitish hair over the cars.

Marne

Marmot (Arctomys), a genus rodents, usually ranked among the Muride, but regarded as forming a connecting link between that family and f quirrels in their their form

emble rats andand mice. They have two incisors and two premolars in each jaw, four molars on each side above, and three below. The common M., or Alpine M. (A. alpinus), is a native of the Alps, the Pyrenees, and the more northern mountains of Europe, up to the limits of perpetual snow. It is not a native of Britain. It is about the size of a ralhit, greyish yellow, brown towards the head. It feeds on roots, leaves, insects, etc. It is gregarious, and often lives in largo soelcties. It digs large burrows with several chambers and two entrances, generally on the slopes They spend the of the mountains. They spend winter in their burrows, in chamber of which is a store of dried grass; but the greater part of the winter is passed in torpidity. The Alpine M. is easily tamed. The Quebec Marmot (Arctomys empetra), found in Canada in woody districts, is a burrowing but not a gregarious animal.

Marne: 1. A riv. of France, the Matrona of the ancients, the longest in the Seine, on the right. It rises in the plateau of Langres, flows through the depts. of Haute-Marne, Marne, Aisne, and Seine-et-Marne, in a course at first to the N.W., and then to the W., with many windings: passes Chaumont, Joinville, St. Dizier, Vitry, Châlons, Epernay, Château-Thierry, and Meaux; and joins the Seine at Charenton, 4 m. above Paris. Its length is 326 m., and it is navigable for 126 m. It is rather a rapid stream, and in most places with a wide bed. The commerce carried on upon this river has been oxtended by means of canals, which link up the Rhine and the Aisne. The most important of these is the one completed in 1851 connecting it with the Rhine. 2. An inland dept, in the N.E. of France, formed out of the old prov. of Champagne, is traversed by the R. Marnc, and extends soutbward from the frontier dept. of Ardennes. Arca, 3167 sq. m. Tho soil is very Arca, 3167 sq. m. The soll is very fertile in the S., but chalky and arld in the N. The surface is undulating in the centre of the dept., the remainder being of a level character. It is in the dry and chalky soil of the N. of this dept. where the best varieties of the famous Champagne wines (q.v.) are with darkish-hrown fur and long grown. Other industries include tanning, brewing, and pottery manuf. The rearing of a Spanish breed of sheep is a chief branch of industry, and woollen manufs, are largely carried on. Cap.

Châlons. Pop. 436,310.
Marne, Haute-, see HAUTE-MARNE. Marnix, Philipp van, de Sainte-Aidegonde (1538-98), a Dutch writer and Protestant reformer; studied theology at Geneva. He drew up the Compromise of Breda (1566) opposing the Inquisition and encroachments of Philip II. As mayor of Antwerp (1584-85), he defended the city against Alexander, Duke Parma. Next to William of Orange, rarma. Next to William of Orange, he played the chief part in the liberation of the Netherlands. His principal work is a Calvinistic satire on Catholicism, *De Roomsche Byen-korf* (1569), published under the pseudonym 'Isaac Rabbotcnus.' He translated the Psalms into Dutch verse, and was the reputed author of the folksong Wilhelmus van Nasson. verse, and was the reputed author of the folksong Wilhelmus van Nassou-ven, the hymn of Dutch liberty. See Motley, History of the United Nether-lands, 1, cb. iii.; Life by Prlus (1782), Dresselhuls (1832), Brocs (1838-40), Quinet (1854), Juste (1858), Tjalma (1896).

Marocco, see Morocco.

Marochetti, Cario, Baron (1805-68), an Italian sculptor, settled in Paris after 1827, and was a pupil of Baron Boslo. His works include: 'A Girl Playing with a Dog' (1827); 'The Battle of Jemappes,' a relief on the Aro de Triompho of Paris; cquestrian statues of Emmanuel Philibert and the Duke of Oricans; and in Great Britain an equestrian statue of Richard Courde Llon (1851), Westminster. Statues to Queen Victoria (1854), and Wellington at Glasgow, and the Inkerman monument at St. Paul's are by him.

Maronites, a Christian sect of the

ottoman empire, so called from their Syrian founder, Maron, of the 4th (or possibly 7th) century. Their original homo was Mt. Lebanon, and they also dwelt in Anti-Lebanon and Hermon, and near Antioch. Originally, Monathelites becaming Also dwelt in Anti-Lebanon and reference, and rear Antioch. Originally Monothelites, becoming prominent in 713, owing to the Monothelite controversy, they

Theodora, noted for her transfer of the 10th century (d. c. 938).

thelite controversy, they united to the Roman Church

thelife controversy, they united to the Roman Church und since 1216 have been Catholies. Their head, styled the Patriarch of Antioch, resides at the conservery of Kanobin on Mt. Lebanon. In 1584 a Maronite college was founded at Rome for training their ciergy. They number about 300,000, and, like the Druses, have 1860 been subject to the governor of the Lebanon appointed by the Porto. See Schnurrer, Decelesia Maronitica, 1810; Bliss, Pal.

iron and copper founding, Expl. Fund Quarterly Statement, 1892; Cath. Dict., 1885.

Maroons, or Negres Marrons (Sp. cimarron, fugitive), a name applied in Jamaica and Dutch Gulana to runaway negro slaves. The term was first used of the negroes of Jamaica who fied to the mountain fastnesses in tire West Indies after the English occupation of Jamaica (1655). They long resisted the British colonists, but were finally subducd (1795-98). Many were transported to Nova Scotia and thence to Sierra Leone, Bush negro 'ls now a more usual name. See Palgrave, Dutch Guiana, 1876; Blake, North American Review, Nov. 1898.

Maros River, a riv. in Hungary, and a tributary of the R. Theiss, which it joins at Szegedin. It rises in the Carpathians, and is 450 m. long.

Maros Vasarhely, a tn. and the cap. of Maros-Torda co., Hungary, on the Maros R., 52 m. N.N.E. of Hermann-stadt. The lnhabitants are engaged in sugar-refining and in the manuf. of tobacco, beer, and spirits. Pop. 20,000.

Marot, Ciement (1495-1544), a French poet, son of Jean (d. 1523), through whose influence he was introduced to court circles and became page to Marguerite d'Alencon. Imprisoned for heresy (c. 1526), M. wrote an allegorical satire, Enfer. Ho accompanied the campaigns of Francis I. (1520 and 1525), and was wounded at Pavia. Hls works include: Adolescence Clementine, 1532-33; and a translation of Psalms I.-I., 1541, condemned by the Sorbonne. This was later completed by Beza. HIs Collected Works appeared in 1538 and 1544; Jannet's ed., 1868-72; Pifteau's ed., 1884; Guiffrey's ed., I.-iil., 1875-81. His rondcaux, cpi-1.-111., 1875-81. His rondcaux, cpi-grammes, ballades, and etrennes are examples of his best poetry. La Fontaine and others imitated the style Marolique. Seo Life by Douen (1878-79), Moriey (1870); Sainte-Beuve, La Poésie française au XVIme Siècle; Expert, Le pseautier hugue-met 1809.

of Manchester.

103 It is engaged in the

cotton manuf. Pop. (1911) 6484. Marprelate Controversy, a Puritan attempt to defy the power of Whit-gift, Archbishop of Canterbury and the Star Chamber. John Penry commenced the struggle in 1586 with a petition to parliament accusing the bishops and clergy in Wales of gross neglect of their duties. He was arrested but only suffered a slight imprisonment. Then from 1588-90 a number of ciergymen under Penry's leadership flooded the country with bitter pamphlets under the pseudonym of 'Martin Marprelate.' These were answered in equally bitter and unrestrained language by the 'Anti-Martinists,' chief among whom were John Lyly and Thomas Nash. Public opinion would not allow harsh treatment of the Martinists. Later, however, when the heat of the controversy had died down, Penry, Barrow, and Greenwood, were arrested on other charges and were hanged in 1593. Seo Cambridge Modern History, vol. iii., 1906. Taladalah Wilheim (1718-

on music, and of works are: Fuge, 1753-54; Beyträge, 1754leneral bass und 5-62; Anleitung : Grove, Diet. of Music (you man, a stis, Blog. Univ.

des Musiciens. Marque, Letter of, see LETTERS OF

MARQUE. Isles are, marquesas Isles are, properly speaking, the southern group of the Mendaĥa Archipelago, in Polynesia, the northern group bearing the name of the Washington Is.; but the name is now applied to the whole archipelago. The M. I., in fat. 7° 30' to 10° 30' S., long. 138° to 140° 20' W., were discovered by Mendaĥa de Newra, a Spanich paylgray in 1506. Marquesas properly Neyra, a Spanish navigator, in 1595; the Washington Isles were discovered in 1791 by Ingraham, an American. The largest islands are Nukahiva (the scat of the French commissioner) and Hivaoa. The islands are of volcanic origin, and are mountainous, rising in some cases to over 3800 ft. above sea-level; the soll is rich and fertile, and the climate hot, but healthy. Cocoa-nut, bread-fruit, and papaw trees are grown, and bananas, plantains, oranges and sugar-cane are cultivated. The inhabitants are degraded in their religion and in many of their customs. Cannibalism, once practised, is now suppressed. In 1842, the M. I. submitted to the French, and now form a French protectorate. Total Florence, Italy, 30 m. N.E. of form a French protectorate. Total Florence, Pop. 10,000. araca, 480 sq. m. Pop. 3500, having the decreased from 100,000 during the Italian poet, born at Livourne. An iast ecutury.

Marquetry (Fr. marqueter, to variegate, Inlay), the name of a kind of inlaid work similar to mosaic work, especially used for the decoration of furniture. It consists of veneering or inlaying plain white wood with costly woods of varied tints, or with other materials, such as tortoise-shell, ivory, metai, mother-of-peari. Shaped pieces are so combined as to form beautiful designs. M. is a later development of intersia; the pieces are affixed to a matrix by glue. The art was known from the earliest times to the Egyptians and Greeks and other Eastern peoples, and was introduced from Persia to Venice in the 14th century. The Dutch and Fronch marqueteurs (P. Gole, Vordt, Jean Mace, and A. C. (P. Gole, Vordt, Jean Macé, and A. C. Boule) are some of the most noted. Roentgon, Reisner, and Ochen wero famous German theinistes of the 18th century. See Turck, Marqueterie for Amaleurs, 1899; Wells, Veneering, Marquetry, and Inlay; Jackson, Intarsia and Marquetry, 1903.

Marquette: 1. The cap. of Marquette o., Michigan, U.S.A., on the S. shore of Lake Superior. Large quantities of Iron ore are shipped from the docks, and the town manufs. machinery and ongines, and has iron foundries and Jumber works. Pop.

foundries and lumber works. Pop. (1910) 11,503. 2. A tn. in the dept. of Nord, France, 3 m. N. of Lille. Pop. 5500.

Marquis, or Marquess (originally an licetivo, 'march count,' from M.L. archio). Originally in European adicctivo, marchio). countries this was the title of the rulers of certain fronticr lands or marches' (lords-marchers of Great Britain, margraves (Markgraf) of the Continent). This foreign equivalent was very common on the Continent. Then it came merely to indicate a certain degree of the peerage in England, ranking below a duke and above a count or earl. Robert de Verc. ninth Earl of Oxford, was the first M. in this sense, created 1385. He was created Marquis of Dublin by Richard II. to the great offence of the caris, who had to yield to him pre-codence. The marquisate became firmly established under Henry VI. in 1442. It was adopted in the Scottish peerage in 1599, when the Marquises of Huntly and Hamilton were created. The marquisate of Winchester, created by Edward VI., dates from 1551, and is the oldest in existence. The title is usually territorlal in form, but may stand before

leaving the university inc 1

inspector of cducation for Massa-in 1753 that an Act was passed (Lord Carrara. His chief works avo; Fantasie Hardwicke's Act) with the object of Marine, 1881; Nuovi Canti, 1891; making a formal ceremony essential Marine, 1881; Nuovi Canli, 1891; Ballote moderne, 1895; Rapsodie n edition of

1904 under

ente raccolte ed ordinate. As a poet he is noted for hiselegant style and his love of nature. Marriage and Marriage Law. It is possible, from the exalted doctrines of the Church regarding motherhood, to infer that it was rather that than the inculcation of fraternity among men that has heen the rock-bottom throughout the ages of Christlanity. Certain it is that in spite of its myslical story of Christ and almost nurely Neoplatonic ethic being subject to the severest philosophic criticism, its powerful bold on the popular mind would be retained, if by no other bond, by its uncompromising attitude towards marriage. For once a marriage has been celebrated under the ausnices of the Christian Church, there is uo undoing it, whatever the divorce court may say about the matter. The ecremony, in fact, has become even more important than the contract to marry, and indeed there may well have been no such preceding civil contract. But this was neither the basis of marriage in classical times nor yot in comparatively a In Roman times consent was of the very essence of a valid marriage and religious ceremony a merely accessorial matter designed rather to hring the wife into the power of the bus-band and initiate ber in the sacra of her new family. Later mere dissent would suffice to dissolve the married state, with the inevitable result of a moral laxity that paved the way for Christian teaching. In England, orlor to the decrees of the Council of Trent in 1563, it was the general European law, notwithstanding the Church, law, notwithstanding the Church, that a mere agreement to marry supplemented by cohabitation was enough to constitute marriage, and that no formal secular or ceclesias. tical ceremony was necessary. Tho Church, however, through the ecclosiastical courts, could compel the parties to such informal arrangement to celcbrate the marriage in due form. But the validity of these informal marriages was indirectly destroyed after 1540 by an Act which provided that a subsequent formol marriage with another person constituted a valid marriage; and some twenty years later the decrees of the Council of Treut made a religious ceremony INFANOY.) No physical infirmity will practically a sine qua non for all justify either the ceclesiastical or the Catholic countries—decrees which after the Reformation had, of course, no force in Great Britain. It was only

to an Engilsh marriage. This Act was superseded by the Marriage Act of 1823, though the question of validity of informal as opposed to irregular marriages (e.g. marriages hy 'Fleet parsons,' see below) was left open; and again, informal marriages are valid to this day in Scotland (see olso HAUIT AND REPUTE) Since the decision of the House of Lords in the case of Regina v. Mills in 1843, it is generally agreed that all secular forms of marriage other than those allowed hy statute, e.g. marriages before a registrar, are invalid. Jews and Quakers, however, enjoy certain privi-leges. The indirect effect of this legislation was to foster the action of hreach of promise, for the power of the ccelcsiastical courts to compel parties to marry who had contracted to do so informally was abolished. One ex-traordinary result follows from the sanctity of the religious ceremony: a girl of twelve and a boy of fourteen can be married by the Church, though they would beincapable of contracting civiliy. Nothing further is required to validate a formal marriage in the Church than the ceremony, assuming the parties are not within the prohilited degrees of affinity, though it bas sometimes been doubted in legal circles whether the marriage is actually irrevocable before consummation.

Requirements of a validly celebrated marriage.—It is said to be essential to a validly celebrated marriage that the following conditions concur: (1) The capacity of hoth parties to enter into a binding contract of marriage.

previous subsisting marriage or the consanguinity of the parties. But it is at least doubtful whether, if the Church did celebrato a marriage of children below the ages previously noted, the marriage would not stand subject to either infant's repudiation at majority. Again, consent, as pointed out above, is more or less merged in the ceremony, and it may be said that 'free and jutelligent' consent is implied in most cases of normal persons. (As to a lunatie, see under LUNACY.) The absence of parental consent, or that of a guardian, will not vitlate a marriage unless protest were made on the publication of the hanns. (See also INFANCY.) No physical infirmity will

prior marriage, it is to be observed! that the law exempts from the penalties of biganty any person who, not having heard of his or her spouse for seven years and hona fide believing that spouso to be dead, marries again; but if the belief prove to bo illfounded, the second marriage is of course none the less a nullity. No one may marry his (or her) lineal descendant, or a lineal descendant from his (or her) husband or wife, or person from whom he (or her) or his former wifo, is, or was, lineally descended, nor any collateral relative up to and including the third degree. (As to the mode of reckoning degrees, see under DISTRIBUTIONS, STATUTES OF.) blood relations of a man's wife arc regarded for this purpose as his own relatives and vice versa. A man may now marry his deceased wife's sister (see under Deceased Wife's Sister).

An Anglican or Church form of marriago must be eclchrated according to the rites of the Church of England as act out in the Book of Common Prayer. It must take place some time botween 8 A.M. and 3 P.M. Before the day of marriage the parties must either have the banns published or obtain a dispensation from such publication in the shape of a 'common' or 'special' licence. The object of the publication of banns is to afford an opportunity of pro-testing to any one who may know of some 'just cause or impediment' to the marriage taking place. The fee for publication is about one shilling, varying with custom. The parties need not

The mar:

of bunns, or the obtaining of the licence. (As to the fees payable on Fund.) A special licences, see under FEES.) licence allows the parties to marry at any convenient time or place, so that there is no obligation to marry cither within the above-noted canonical hours or in an ecclesiastical build-The minister officiating at marriage must make a record of the marriage in his register, and the presence of two witnesses is required at this formality, though their absence would not invalidate the marriage.

Marriages before a registrar.—Marriage by civil contract, in the presence action by foreign countries whose in-of a superintendent registra some duly registered Roman

or Dissenting place of wors allowed by an Act of 1837.

ligions ceremony may he suprama, but is not essential. These marriages may be solemnised either by or without licence; (1) At the register office of the district in which either of the parties or both are residing, or (2) at or permanent home of each party. It any registered Roman Catholic or may be noted, too, that it is useless

Dissenting place of worship within the district with the consent of the minister, or (3) at any such registered building within two miles of the limits of the district being the usual place of worship of either party, or (4) at the nearest registered building, when there is no such place in the district, as specified in (1), (2), and (3). If by licence, fifteen days' residence by one or other of the parties is required; if without, seven days' resiboth parties, and public dence by notice of the marriage exhibited at the register office for twenty-one days prior to the marriage. This actice is entered in the Marriage Notice Book kept by the registrar, and any one inspecting the book may enter a coveat, or objection, to the marriage, subject to the action of damages if he

does so without justification.
Foreign marriages, or marriages abroad of British subjects, and morriages between persons one at least of whom is not domiciled in England. The Colonial Marriages Act. 1865, renders valid all marriages, however irregularly celebrated, which have heen confirmed by a subsequent statute of the colony where they were celebrated, provided the parties at the time of the marriage were com-petent to marry by English law. Such validation has not necessarily any effect outside the British empire. By the Foreign Marriages Act, 1892 a marriage abroad of a British subject hefore a 'marriago officer' (i.c. a British ambassador, consul, or high colonial official appointed ad hoc) is valid in any British court so far as

ormalities are concerned, whatever ormalities may be required by the law of the nation to which the other party belongs. Questions of, e.g., consent of parents and capacity would be questions of substance and not form. and therefore due effect would be given to the foreign law anent such matters. By the Marriage was Porcigners Act, 1906, notice of an intended foreign marriage must be given by the English party to a registrar in matters. By the Marriage with showing th en ٠to

given must the marriag 150 provision in the Act for reciprocal

above

irriage

of c.

In the hope of evading the formalitles or other requirements of their own law, e.g. divorce by mere verbal de-claration is effectual by Egyptian law, but an Englishman could not, therefore, divorce his wife by taking her to Egypt and pronouncing the necessary words of repudiation. (As to divorce generally, see DIVORCE, JUDICIAL SEPARATION, and HUSBAND AND WIFE.)

Restitution of conjugal rights.—If one party without justification withdraws from the society and presence of the other, the latter may petition the divorce court for a decree for restitution of conjugal rights. But the non-observance of such decrees cannot be enforced by imprisonment as for contempt of court, and their only value is by way of proof of desertion on which to base a subsequent petition for dissolution or judicial separation. See also Jenks, Husband and Wife in the Law (J. M. Dent & Sons), 1909; Eversley and Cruies, Marriage Laws of the British Empire, 1910.

Intermarriage.—There is, or has been in the past, a custom among certain savage tribes in accordance with which members of the tribe are, or were, not allowed to marry outside their own tribe. Endogamous tribes are, however, frequently exogamous as regards clans within the tribe itself, e.g. the Abors of India forbid marriage outside the tribe, but at the same tlmo a member of a particular cian or 'keeli' within the tribe may not marry another person belonging to that clan. The whole subject of exogamy and endogamy has been investigated in M'Lennan's Primitive Marriage (1865), though some of his fundamental assumptions have been fundamental assumptions have been severely criticised in Lord Avebury's Origin of Civilisation, and by Horbert Spencer. According to M'Lennan the practice of exogamy was dictated not by any principles of morality or race-culture, but by the mere fact that the carly custom of infanticide (q.v.) resulted in a searcity of women with resulted in a scarcity of womon within the tribe, and that this scarcity led not only to stealing women of other groups, but to polyandry within the tribe itself. The position of M'Lennan that exogamy and wife stealing have been practised at a certain stage by every race of mankind, and that endogamy is a form reached only through a long series of social developments is refuted by Spencer on the ground that there coexist and have coexisted endogamous and exogamous tribes equally low in the scale of civilisation. It seems far more probable that intermarriage, e.g. as they merely decided the position of the characteristic of the tribal groups wife so far as the question of submentioned by Mr. Jenksin hisaccount jection to her husband's power was

for parties to go to a strange country of Totemism (History of Politics), is a feature only of primitive stages of social organisation, and that in most cases it has preceded exogamy. Nevertheless, endogamy prevails at the present day among certain tribes in Java and Central America (see also in Java and Central America (see also Westermarck's History of Human Marriage, 1894; Spencer, Principles of Sociology, vol. 1, ch. 1v.). As to the prolibition in ancient Rome of marriage by a patrician with a plebeian, see below.

> Marriage customs, ancient

for her husband. Courtship was of short duration, and the marriage was cclebrated at a cromlech in the opea alr, while sacrifices wero offered. Polygamy was formerly practised. Romans.—The oldest Roman form

of marriage was called confarrcatio, the name and ccremony being detion

Ceres was tile god immediately concerned, in ancient Roman ideas, with marriage. Confarreatio was a purely religious ceremony conducted by the state high priests in the presence of ten witnesses representing the ten of the bridegroom's tribe. curies later and was especially contradistinguished from the civil form usus or cohabitation with the intention of forming a marriage. The confarreate form of marriage was competent only to those patricians who had privileges of the jus sacrum, and hence patricians and piebeians could not Intermarry at one time. The plebeians had no analogous ceremony, and the wife only fell under the power (manus) of the husband either by a process of fietltious sale called coemptio, or by implication from remaining with the husband for one year; but confar-reatio necessarily involved marital power. If a wife, married by the process of coemptio, absented herself for three consecutive nights in the year, her husband did not acquire manus over her. The civil form of usus was not introduced out of grace to the pichelans, but rather, according to Mommsen, for the express purpose of preserving the patriciato; for otherwise the sacra would have had to be extended to the plebelans. The union of mere slaves was called contubernium, and was nover regarded as more than a promiscuous relationship. The peculiarity of these old Roman forms of marriago was that they did not in themselves constitute the tie:

concerned. The tie itself was ap-the priest presents the pair with a parently constituted by the mere goblet of winc, blest for its partleular consent given on both sides, and the office. Further prayers, benedictions, nuptials or rites and ceremonics of and compliments, and the removal initiation into the husband's sacra were looked upon as merely accessorial to such facts as evidenced tho cousent, e.g. the reception into the iusband's home. The bar against patriclars intermarrying with pic-beians was removed four years after the decenviral revolution, viz. by the Cornelian Law (444 B.c.), a law which like many other contemporaneous democratic institutions owed lts enactment to the increasing wealth of the plebeians. But for long afterwards a Roman citizen could not other than a Roman eitizen could not be a considered with a Roman eitizen, though Antony braved Cicero's reproach by marrying Fulvia, the daughter of a freed man, and later, public detestation, by marrying his third wife, Cleanary a foreigner. But in 0.4. Cleopatra, a foreigner. But in 9 A.D., after the extension of citizenship by the celebrated Lex Pania Poppea, Romans were permitted freely to intermarry with foreigners and freed uen. By the time of Justinlan, marriage was a purely commutual relationship subsisting only so long the parties marriage than the property of the proper as the parties mutually consented to live with each other.

Ancient andmodern Greeks. With the ancient Greeks the nuptial With the ancient Greeks and nuprangeremony was a symbolic representation of the forcible carrying away of the bride, by way of allusion, it seems, to the Greek tradition that a bridegroom should only be entitled to his bride by performing some berole feat or subtle stratagem; e.g. the my thical here. Theseus is famous for the tradihero Thescus is famous for the traditional abduction of Helena, daughter On the wedding day, tho of Leda. betrothed pair having laved them-selves in water drawn from some special fountain, went to the temple, followed by friends singing peans of praise. Sacrifices were made at the altar, and the bride, at least, if of the arear, and the bride, at least, it of the wealthier classes, was conducted to her new home in the evening in a chariot drawn by oxen or mules. There is nothing analogous in the modern Greek marriage ceremony to the heathen customs, the whole spirit of paganism having long siuce given place, much in the same way as intelligible of the wild free mature-laying

of the crowns conclude the pious ceremony.

Welsh customs.—The custom of giving 'bidding letters' intimating an intended marriage, its date, and the intent of the parties to make a blddling at some inn to ask for the pleasure of the company and support of the parties to whom the letters were sent, was formerly almost universal, but though it may exist among the humbler classes, is now practically number classes, is now practically obsolete. There was also an old British custom called 'Purse and Girdle,' by which the bride's goods, comprising generally an oak chest and feather bed, were taken on the day before the marriage to the bride-groom's house, while the groom in the evening received his friends' citte. evening received his friends' gifts. Cardigan weddings were often charaeterised by a procession of friends headed by a narper or fiddler. Lord Rames mentions a custom which is strongly reminiscent of the old eustom of marriage by eapture. The bridegroom on the morning of the wedding day went on horseback with his friends to his futuro father-in-law's house and demanded the bride. to which demand the bride's friends gave a positive refusal; whereupon a mock encounter took place, which eventuated in the bride fleeing on horseback with her nearest kinsman,

and being pursued by the groom, who, of course, was suffered to overtake her. Scottish customs: Gettna Green marriages.—Gretna Green ls celebrated in history as having been the

Scotland had but to make a mutual declaration of marriage before a witness—the work of a moment—and such ceremony obviated all difficulties of age, consent of parents or guardians, banns, and so forth. A local fisberman, joiner, or blacksmith, or oven the driver of the coach, has, according to Pennant (Tour in Scolland), undertaken the duties of the sacerdotal office. The place, much in the same way as in! Tour in Scotland), undertaken the Ireland the wild, free, nature-loving duties of the sacerdotal office. The emotional temperament has become duties of the sacerdotal office. The first person who is reputed to have dominated by elericalism to lighted a couple at Gretna Green was tapers and signs of the cross, and other features of the ritual of the Greek Orthodox Church. Two rings are used—a gold one for the bride-groom and a silver one for the bride. After the sign of the cross has been made by the priest with thorlngs, the altar, dressed in a full military uniform of antiquated appearance crowning ceremony is performed, and

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Robert Elliott). Later, it seems there eustomary for the company to retain was much competition, and conse-possession of the dwelling-house or quent bribery of postillious to favour the particular rendezvous of a partienlar 'parson.' The efficacy of Gretna Green marriages bas been destroyed by the provision in the Marriage Act, 1856, which requires residence for three weeks in Scotland of at least one of the parties. ' Handfusting ' was an old customary form of marriage which for long prevailed in Eskdale and neighbourhood. According to Sir John Sinclair's Statistical Account of Scotland (1794), couples choso each other at somo thuc-honoured fair, and, after a year of cohabitation, they continued to-gether for life if such probationary period proved mutually satisfactory. If not, they separated, and the dis-affected one was saddled with the issue. If each was disaffected it seems the husband had the issue. Later, such marriages were looked upon as perfect only when subsequently confirmed by a priest. Tegg (The Knot Tied) suggests with much probability the genesis of the custom in the Roman usus. There was also an old toman usus. There was also an old peasant custom of betrothal by mutual licking of a cities to the gether of the result in the licking accompanied by the way of middle. Betrothal by hands clasped across a brook in which the pair had been previously washed has a more control to a control to the control to spiritual flavour about it, and is celebrated as the ceremony that took place between Burns and 'Highland Mary.' In many rural districts the Mary.' In many rural districts the name of 'Penny Weddings' was popularly given to those weddings which were characterised by the observance of the ancient custom of levying a penny (equivalent to a modern shilling) from all who were going to be present at the celebra-It seems that during the tions. century these weddings degenerated into seenes of disorder, and in 1645 they were condemned by the General Assembly, and in 1647 tho Presbyteries of Haddington and Dunbar ordained that not more than twenty persons should assemble at weddings, and that piping dancing should cease. Among border villages 'erecling the bridegroom was a popular custom. A creel or wicker basket was placed on the bridegroom's back and a long pole with a broom affixed laid over his left shoulder. So burdened he was expected to run a race, while the strength of his bride's affections was

cottage of the pair for the first night, while the latter were relegated to some barn or outhouse. Formerly, too, a young Highlander sufficiently confident of his good esteem was wont near regged from seed? and so forth, until he had the nucleus of a beginner's agricultural stock. See Rev. Chas. Rogers, Scotland, Social and Domestic.

Irish.—So people that the sect

Irish marriage law, which regulates at every turn the conditions of the contract according to religious distinctions, has left but little room for customs that are not in the maiu formalities of ritual.

Among the Egyptians, 'mahr,' or dowry, is indispensable to union with a chosen female. The compact of marriage is settled by the womau's 'wekeel' (deputy). Among the upper classes the man has next to no chance old of ever seeing the woman's face before by marriage, and has perfore to satisfy the himself with the description of here.

..., by professional 'khat'behs' or by professional 'Enat'behs' or women whose vocation is to give men information about eligible girls. On the day appointed for the ceremony, the bridegroom goes to the bride's house with the promised dowry, and is received by the wekeel. The marriage contract is witnessed at the Madagan and all present residents. by two Moslems, and all present reelte by two Mosems, and an present retrieve the Fát'beb or opening chapter of the Koran, the various phases of this ceremony being performed or controlled by a 'fixe' (schoolmaster). After the contract is concluded, the bridegroom waits about ten days for his bride, towards the end of which time the streets in the neighbourhood of the bridegroom are illuminated and entertainments given. Two days prior to the ceremony the brido goes in stato to the bath, tho procession being beaded by a party of musicians with hautboys drums. After this tho bride and her companions sup together in the house of the bride's family, where the bride, having mixed some benna into a tbick paste, sticks it on the palm of her hand and invites her guests to put gold coins into it. Having scraped it off again, more henna is then applied to her hands and feet and left in position till the next morning. strength of his bride's affections was Too bridegroom also sits among his estimated according to the degree of companions, after which ho goes to cagerness she showed to free him from some mosque and says his prayers, his encumbrance. The custom with preceded by musiclans. There are a variations olso existed in Ayrsbire. great many more tedious customary Among the Highlanders it used to be steps before the marriage is com-

pleted. The curious part about people of mechanical emotions and Egyptian marriages is that it is only marionotte-like manifestations. at the last moment that the bridegroom, having paid what is called the price of the uncovering of the face, has a chance of satisfying himself on the question of his bride's personal appearance. If he is not satisfied he generally retains her for a week or more bef Modern

bar to th who are, however, inferior in status to the legal wife. Divorce is complete by the simple process of having thrico verbally said 'Thou art divorced,' when the dowry has to be

returned.

Chinese. - According to the Chinese. marriage goes by destiny, from the fact that the Buddhist teaching is to tho effect that those connected in a previous existence become united in this. Once Yuelaou, the delty of the moon, has united all predestined couples with a silken cord, nothing can prevent their ultimate marriage. However this myth may be interpreted, we may be sure that if two parties of equal rank and station are 'dostined' to intermarry their horoseopes as compared by the judicial astrologers are not likely to stand in their way. By some strange perversion of national character, live geeso are among the presents given, on the supposition that they are symbolical of the contract of marriage. On the evening of the wedding day, the bride, on reaching the hride groom's house, is lifted by her friends over a pan of charcoal at the door the symbolical meaning of which act must be left to conjecture. Courtship and marriage amoug the wealthy Chinese are matters settled exclusively by the parents, who fix the time of the nuptials and consult, therefore, the ealendar for propilious day. The solemnisation of marriage is always preceded by three days' monraing, during which time all the relatives abstain The solemnisation from every kind of amusement; formed the duties of that office, the reason for this custom being which consisted in covering the head that the Chippes regg.

In France a provincial marriage requires both a civil and religious ceremony for its completion, all the pomp and parade being reserved for the latter occasion. The 'civil marriage' is performed at the mayor's office before a registrar, who, having made the necessary entries, reads passages from the Code Napoleon relative to the law of marriage. Prior to the church cere-mony the parties have to produce their tickets of recent confession. The hridal cortège, including the bridogroom, all leave at the same timo from the bride's parental residence. The service is very similar to that in an English church, except that there are additional Romish features in the shape of swinging consers, silk campies, and hely water.

Quakers or Friends.—There is next

to no formality in a Quaker marriage. Notice of intention to marry is to be given to the Quaker Ecclesiastical Council, which latter hody make proper inquiries, and if no opposition is forthcoming and a liecnco has been obtained from the superintendent registrar of marriages, the marriage

is ipso facto complete.

Hebrew customs. - According Scripture, the eustom of purchasing brides prevailed among the deseendants of Abraham, and undoubtedly the custom still exists in many parts of the East. The alternative for a poor man was to obtain a bride hy servitudo. Conformably with Oriental custom, esponsals began at a very early age, and males at the age of eighteen and females at twelve were competent to marry. The hride's hair was always disposed in ringlets, and so has been frequently compared to that of goats ou Mt. Gilead. The ceremony itself was performed, as a rule, at the house of the bride's father, and usually the latter acted as the 'celebrator,' if not, the rabbi or 'hezen' of the synagogue performed the duties of that office,

that the Chinese rega of their offspring at their offspring at their offspring at their offspring at their daughters in marriage to whom they please. A son dare not refuso the brido selected for him by his father any more than tho daughter can, hut it is only among the lower orders that purohase and sale is common.

Japanese marriage customs require but little description. As may be imagined, flambeaux, flogs, streamers, flowers strewn over thresholds, and loud exclamations of joy characterise the ceremonies of this which consisted in covering the head which consisted in covering the head "'' ride with the extremity of groom's thelet' and contact a cup of winc. It was the custom for the brido's father to give on her leaving his house. After the ceremony there was usually a procession with dancing and music by torchight to the groom's house, the pair walking or being borne along under a canopy. Every one who met the procession gave place to it. At the procession gave place to it. At the care in the custom for the brido's father to give to whom they please. A son dare the acup of winc. It was the custom for the brido's father to give to selected for her leaving his house. After the ceremony there was usually a procession walking or being borne along under a canopy. Every one who met the procession gave place to it. At the procession gave place to it. At the cation of the custom for the brido's father to give a cup of winc. It was the custom for the brido's father to give a cup of winc. It was the custom for the brido's father to give a cup of winc. It was the custom for the brido's father to give a cup of winc. It was the custom for the brido's father to give a cup of winc. It was the custom for the brido's father to give a cup of winc. It was the custom for the brido's father to give a cup of winc. It was the custom for the brido's father to give a cup of winc. It was the custom for the prido's father to give a cup of winc. It was the custom for the prido's father to give a cup of winc. It was the custom for the

is no doubt that the modern Jews of land the interstices of cancellous er both sexes are praiseworthy for their love of and respect for marriage, and apparently premature and improvident unions seldom eventuate in pauperism or unhappiness. Modern pauperism or unhappiness. Modern Jewish weddings are, or were till recently, remarkable for the curious eustom of 'sitting for joy,' by which is meant that the bridegroom, after visiting the synapogue for the 'reading of the Law,' sits in his bride's home and for the whole day receives congratulations. The better classes manny he some bell or hotel or at marry lu some hall or hotel, or at home, the poor in the synagogue. There is a curious enstom by which one of the officials deposits at the bridegroom's feet a small board on whileh is placed a wine-glass; this the groom stamps upon, when those assembled ery out, Good luck! Good luck!

Fleet marriages .- These were clandestine marriages that generally took place at the 'Fleet prison' without publication of banns by real or pre-tended elergymen known to posterlty and the readers of Tom Brown's works as 'Fleet parsons.' The first recorded marriago at the Fleet is that mentioned in a letter from Alderman Lowo to Lady Hickes in 1613, wherein the writer states that a mutual acquaintance of theirs, one Georgo Lester, having on the pre-vious day in the Fleette 'maryed' vious day in the Friette maryon the wealthy mother-in-law of one Thomas Fanshawe, would be able to 'lyve and mayntayn himself in prison.' Formerly these marriages took place at Duke's Place and Visibly Minoples until checked by Trinlty Minorles, until checked by the state, after which they were conthe state, after which they were continued in unabated vigour at or in the vicinity of the Fleet by parsons, real or bogus, who were generally prisoners in the Fleet with neither money nor credit to lose by any proceedings which the bishop might see fit to institute against them. The last of the Fleet weddings was in 1754, when, after years of abortive legislation, Hardwicke's Marriage Act of 1754 came into operation. See Tegg's The Knot Tied (1877), from which some of the above-noticed customs are quoted. Bîbliography. — W

Customs: The Wedd Countries and Ages; Law of Marriage c Ashton, The Fleet: i. and Marriages.

and the interstices of cancellous or spongy bone. It consists of fat cells/red corpuscles fully developed and somo in process of formation, and giant cells called myoloplaxes. There are two kinds of M., red M., which is associated with the early life of animals, and yellow M., which fills the tubular bones in later life. The function of the M. is the formation of red corpuscles, and in certain of red corpuseles, and in certain forms of anomia the diseased condition is probably due to a disturbance of this function. In some such cases the M. has been found to have undergone great changes and to tend to revert to its embryonic condition. M. has been employed in the treatment of perniclous anæmia.

Marrow Controversy. In 1718 an old English puritunic book called The Marrow of Modern Divinity, first published in 1646, was republished by some Scottish divines, including including Thomas Boston of Ettrick in Schirk. Its extreme Calvinism caused the General Assembly to condemn it in 1720. This caused a great religious struggle in Scotland, at its flereest from 1718-22. This controversy led eventually to the General Assembly deciding to deposo the Rev. Ebenezer Erskine and three others. anticipated this decision by seceding and forming an 'Associate Presby-tery in 1733. Differences among the seceders themselves oventually led to the formation of 'burghers' and

antiburghers. Marryat, Fredsrick (1792-1848), a ptain in the navy and novellst, captain in the navy and novelist, born at Westminster, and second son of Joseph M., who was at one tims M.P. for Sandwich. He received a private education and joined the Impéricuse in 1806. Ho formed a lasting friendship with Sir Charles Napier and Houston Stewart. In 1812 he was promoted to the rank of lisutenant. He married in 1819, Catherine, second daughter of Sir Stephen Shairp, of Houston, Linlithgow. He took command of the Beaver sloop in 1820, and was employed on the St. Helena station until the death of Napoleon. He succeeded to several other appointments, but finally gave up the sea afte-

> iam's system · the mercan-

tho king of with the France decorated him and Marriages.

Marrickville a tn. In Cumberland

Legion of Honour. After his retireco., New South Wales, 3½ m. S.W. of
Sydney. Pop. 20,000.

Married Women's Property, see
HUSHAND AND WIFE.

Marrow, a fatty substance filling
Frank Mildnay, 1829; Peter Simple,
the control carriity of thyller boose

1834. Middle Mildnay, 1829; Peter Simple,
1835. Middle Mildnay, 1838; The Marrow, a fatty substance filling Frank Mildmay, 1829; Peter Simple, the central cavities of tubular bones 1834; Midshipman Easy, 1836; The

Phantom Ship, 1839; Percival Keene, 1842; and Valcrie. He wroto a pam-phlet, Suggestions for the Abolition of the Present System of Impressment in the Naval Service, which created a profound impression in naval circles at the time. He published several caricatures of a political aud social nature. His stories were taken from personal experience. They are full of life, humour, and stirring narrative.

the outer, Deimos, being 14,600 m. from the planet. These minute bodies were not actually discovered till they were observed by Asaph Hall with the Jargo refractor of Washington Observatory in 1877. So Dean Swift, when he made Mr. Lemuel Gulliver relate that the astronomers of Laputa had discovered two Martian satellites. was merely shooting a bow at a venture for all that it happened to hit the



ject. The argument in favour of life are the 'canals,' or sharp thin lines on the planet's surface, which would appear to be the product of intelli-gencies, and the seasonal waxing and waning of the white polar caps, which are supposed to be of snow, thereby indicating the presence of water, a prime necessary of life. On the other hand, it is suggested that the 'canals' have no objective reality, but are an optical illusiou, and in addition the spectroscope shows that the Martian atmosphere, if it exists at all, must be of extreme rarity.

Mars, Mavors, or Mamers, in Roman mythology, the god of war (Gradivus), carly identified with tho Greck Ares. As patron of agriculture he was known as Silvanus, as proteotor of the Roman state was worshipped as Quirinns. He was held next in importance to Jupiter, and never entirely lost his essentially Italian character. See Roscher, Apollo and Mars, 1873; Wissowa,

Mars, whose orbit lies between that of the earth and Jupiter and is therefore the fourth planet from the sun, known from prehistoric times. When nearest to the earth (about 36,000,000 m.) M., which shines with a reddish light, has more than twice the brightness of the brightest star, viz. Sirius, the Dog Star. The mean distance of M. from the sun is 141,500,000 m., or about one and a half times that of the earth from the sun, and its diameter is 4230 m., or about half that of the 4230 m., or about half that of the carth. As a wealth of detail is visible on the surface of M. its period of rotation has been calculated to a nicety, being slightly more than that of the earth, viz. 24 hrs. 37 min. 23 sees. M. resembling sherry. It contains 20 to 18 possessed of two very small sately sherry and strengthening the wines of Sielly, especially of a light-coloured wine earth, viz. 24 hrs. 37 min. 23 sees. M. resembling sherry. It contains 20 to 18 possessed of two very small sately contains and strengthening the wines of Sielly, especially of a light-coloured wine earth, viz. 24 hrs. 37 min. 23 sees. M. resembling sherry. It contains 20 to 18 possessed of two very small sately contains and strengthening the wines of Sielly, especially of a light-coloured wine earth, viz. 24 hrs. 37 min. 23 sees. M. resembling sherry. It contains 20 to 18 possessed of two very small sately contains and strengthening the wines of Sielly, especially of a light-coloured wine earth, viz. 24 hrs. 37 min. 23 sees. M. resembling sherry. It contains 20 to 18 possessed of two very small sately contains and strengthening the wines of Sielly, especially of a light-coloured wine and strengthening the wines of Sielly, especially of a light-coloured wine and strengthening the wines of Sielly, especially of a light-coloured wine and strengthening the wines of Sielly, especially of a light-coloured wine and strengthening the wines of Sielly, especially of a light-coloured wine and strengthening the wines of Sielly, especially of a light-coloured wine and strengthening the wines of Sielly, especially of a light-coloured wine and strengthening the wines of Sielly, especially of a light-coloured wine and strengthening the wines of Sielly, especially of a light-coloured wine and strengthening the wines of Sielly, especially of a light-coloured wine and strengthening the wines of Sielly, especially of a light-coloured wines of sielly, especially of a light-coloured wines wines of sielly especially of a light-coloured wines of sielly, e

polyte Boutet-Mouvel) (1779-1847), a

française (1799), her first great success being in L'Abbé de l'Epée, 1803. In the plays of Molièro, Marivaux, Sedaine, and Beaumarchais sho was Sedane, and Beaumarchais sno was unrivalled, and she created parts in many less known plays. Allie. M. retired in 1841, appearing as Célimène in Le Misanthrope and Aramintho in Les Femmes Savantes for her 'bonefit.' She made great reforms in stagocostume. Her Mémoires and Confidence (published by Do Requivolt). fidences (published by Do Beauvoir, 1849, 1855) are of doubtful value.

has a cathedral, a vibrating bell-imodern town, elegantly built and laid tower, and a noted grotto and well. There is much trade in wines, grain, and oll, wine and brandy being the chief exports. It has salt-mines and white marble eaves near. Garibaldi and his patriots landed here (1860). Pop. (com.) 64,000.

Marsden, a small tn. in the W. Riding of Yorkshire, England, In the Colue Valley, 7 m. W.S.W. of Huddersfield. It has silk, cotton, and woollen fac-

tories. Pop. (1911) 5767. Marsden, William, F.R.S. (1754-1836), an English Orientalist and numismntist. He went to Sumatra (1771) in the sorvice of the East India Company, and established an East India agency at Gower Street, London (1785). He was secretary to the Admiralty (c. 1795-1804). His works inelude, Hist. of Sumatra, 1783; Dict. and Grammar of the Malayan Language, 1812; a translation of Marco Polo, 1817; Numismata illustrata Orientalia, 1823-25. He presented his coin collection to the British Museum (1834), and his library of Oriental books and MSS. to King's College, London.

Marseillaise, the stirring French Marsellaise, the stirring French national anthem, composed by Rouget de Lisle (1792) as Chant de l'Armée du Rhin. It was sung by the volunteers of Marsellles (hence Its present name) as they entered Paris (July), and at the storning of the Thilleries (August). Forbidden under the Best authors of the second en the Restoration and the second empire, it again became the national song during the France-Gorman War. See A. Rouget de Lisle, La Vérité sur la Paternité de la Marseillaise, 1865; Loguln, Les Mélodies populaires de la France, 1879: monographs of Le Roy de Samte-Croix (1880) and Loth (1886); Grove's Dict. of Music, ii.;

Larousso, v.
Marseille, the first seaport o and of the Mediterranean, in t

of Bouches-du-Rhone, is situ the Gulf of Lyon, 410 m. in linc S.S.E. of Paris. M. is a place of the fourth class, an fended by a citadel and other works; the roads are protected by the fortified isles of 1f (crowned by a castle, once a state-prison), Pomegue, and Raton-Its harbour is formed by an originally built out of the ruins of a heathen temple in the 4th century. Language, The Camel, The Originand Westward from the old town, and History of the English Language, and connected with it by a beautiful The Earth as Modified by Human treat. strect, Le Cours, is situated the 'Action.

out. Here the shops and houses rival in splendour the finest in Paris Other fine streets are the Cours Bonat parte and the Promonade de Tourette The sito of the city is a valley surrounded by hills, the highest of which is Notro-Dame-dc-la-Gardo, M. has sehools of hydrography, medicini, drawing, and music; five hospitals, an observatory, various learned societies, n fine public library, a cabinet of natural history, botanical gardens, and a picture gallery. Shipbuilding and the allied employmens of a seaport are carried on. Ninctem million tons of slipping are entered and cleared annually, and there s extensive trade in grain, coal, soap, oil seeds, and petroleum. During a portion of the year, the climate of M. is delightful, but in summer and autumn the heat is often intease. M. was founded by a Greek colony from Phocea, in Asla Minor, about 600 years B.c. Its ancient name was Massalia, written by the Romans Massilia. It was an important Massilia. It was an important member of the ancient Greek community, planted numerous colonies along the N. Mediterranean shores, and introduced the germs of Greek civilisation into Gaul. In the 8th century it was destroyed by the Arabs, and the maritime republies of Italy inherited the commerce of the Medi-terranean, which formerly had been centred in M. It was united, with the whole of Provence, to Franco In the reign of Charles VIII. In 1720, when it had again risen to great importance, it was ravaged by a fearful epidemic, and 40,000 of its inhabitants swept awny. Pop. 550,619.

Marsh, Mrs. (néc Anne Caldwell)
(c. 1798-1874), an English novelist.

Among her most popular books are: Tales of the Woods and Fields, 1836; 1846; Norman's of them pub-

She inherited operty, Stafford-

Warch, Carron Parking (1801-82), an was clected

Council of the state in 1835, and to Congress In 1842 and 1849. He was then United inlet of the sea running castward into the heart of the city and has great natural and artificial advantages. In more and in 1852 went on a special mediately N. of the harbour is the old town, with narrow streets, lined with high, closely piled houses. It death was the first United States contains the cathedral, a structure minister to Italy. His most important articipally built but of the wring of a reserver.

Marsh, Herbert (1757-1839), a theo-tish political economist, lecturer in of Biblical criticism into England, and gave lectures on the subject at Cambridge, which exeited great his publications interest and controversy. In 1816 he of Industry, 187 was made Bishop of Llandaff, and Principles of E was translated to Peterborough in 1819. His critical views and his Economics, 1904. opposition to the evangelical party in the Church, to the Bible Society, and te Catholic emancipation, involved him in controversy with all churchmen. He was the author of a History of the Politics of Great Britain and France, 1799; Comparative View of the Churches of England and Rome. Marsh, Othniel Charles (1831-99),

an American paleontologist, professor at Yale (1866), noted for his discoveries of many new species of discoveries of many new species of extinct vertebrates, largely from the Rocky Mts. His chief works are: Odontornithes . . , 1880; Dinocerata . . , 1884; Sauropoda, 1883; The Dinosaurs of N. America, 1896. See Woodward in Gool. Mag., 1899; Beecher in Amer. Journ of Sc., 1899. Marshal (Fr. markehol from the

Marshal (Fr. marechal, from It. mariscalco, a farrier), a word which originally meant a man who took care of horses. The importance of the persons appointed to take charge of the royal horses gradually increased, until the word M. signified one of the highest officers of the court. The word now in England usually means the officer who regulates questions of precedence, cto., at official functions. In U.S.A. a M. is an executive or administrative officer for the United States Supreme Court, appointed by the President. With various additions M. represents various ranks, etc., as in field-marshal, marshal of France,

marshal of the hall, etc.

Marshal, William, first Earl Pembroke and Strigull of the Marshal line (c. 1146-1219), an English nobleman and soldier, trusted knight of Henry II., and tutor to his son, Prince Henry After 1187 be found to Henry 11, and those to his son, Fince Henry After 1187 he fought in the French campaigns. He became marshal of England under Richard I., on the death of his brother John (1194). On Richard's death, M. supported Labric and the transfer of the first state of the stat ported John's claim to the throne (1199), and held office under him. On John's death (1216), he became regent of England for Henry III. dur-

Ing his miuority. See Histoire, 1225, discovered by Meyer, Stubbs, Constitutional History, ch. xil. and xiv. Marshall, cap. of Harrison co., E. Texas, U.S.A., 40 m. from Shreve-port, Louislana. It has cotton-rins, oll-mills, an lee factory, and railroad shops, and various educational insti-

logian and controversialist, was the moral science at Cambridge (1865), first to introduce the German methods professor of political economy there professor of political economy there (1885-1908). He was principal of University College, Bristol (1877). at Cambridge, which excited great His publications include Economics interest and controversy. In 1816 he of Industry, 1879 (with his wife); was made Bishop of Llandaff, and Principles of Economics, 1890-91; The New Cambridge Curriculum in

Marshall, John (1755-1835), an American jurist, of English descent, He was elected to Congress (1799), was a member of President Adams's cabinet (1800-1), and chief-justice of the United States Supreme Court (1801-35). He enlisted in the army (1776), but resigned (1781). M. wrote a Life of Geor See Life by

1903: Flander

Griswold, Prose is ruers of America Collon's ed. of his Constitutional Decisions, 1905.

Marshall, Robert, Captain (1863-1910), a Scottish soldier and playwright. He retired from the army (1898), and won success with his play, His Excellency the Governor, produced that year at the Court Theatre. Other plays of his were, A Royal Family, 1899 (rovived 1907); The Second in Command, Haymarket, 1900 (rovived about 1912 at the Playhouso); The Duke of Killicrankie, 1904.
Marshalling, In equity (q.v.) means such an arrangement of the assets of

a deceased person as will seeure their fair distribution to the various persons entitled to shure in them. There are two principal applications of the term: (1) M. as between or the term: (1) M. as between creditors. Equity compels specialty creditors (i.e. those whose dobts are evidenced by a deed) to resort primarily to the real assets (i.e. land), in order that the personalty (property other than frechold or copyhold land) may be left as unexhausted as possible for the simple contract creditors (see Contract); and generally where two persons. X and Y, are creditors of the same debtor, and X to resort to, while Y is limited to A, Y will be permitted to stand in X's place as regards payment of his debt out of B, if X has resorted to fund A (M. of sceurities, or M. as between secured ereditors). But where the different funds belong to different persons, M. is not allowed to the prejudice of third persons. The Idoctrine of M. of securities is of especial importance in regard to second mortgages by a person of two (or more) of his estates, the equitable principle being that in such cases the first mortgage will be apportioned tutions. Pop. (1910) 11,452. between the two properties according Marshall, Alired (b. 1842), an Eng-to their respective values. (2) M, as

between beneficiaries entitled under a will, where creditors have depleted the estate. The general principle herein is that if any beneficiary in the subjoined list is disappointed of his benofit under the will through a orcditor seizing upon the fund or property.intended for such beneficiary he may compensate himself by going against the fund or funds of those coming immediately after him in the list, who in their turn may do likewiso, with the result that those who come last may get nothing at all. The order is as follows: (1) Widow; (2) specific and residuary devisees and specific legates; (3) pecuniary legates; (4) charged devisees (specific and residuary); (5) helr-at-law (q.v.); (6) devisces upon trust; (7) next of kin or

devisees upon a tas, it residuary legatees.

Marshall Islands, a group of coral formation in Micronesia, Pacific Ocean, N.E. of the Ladrone Is., Polynesia. There are two groups, Ratak nesia. There are two groups, Ratak (E.), and Ralik (W.), both ranging S.E. to N.W. The whole archipelago Is composed of some thirty-three atolls, 158 sq. m. in area. They were annexed to Germany (about 1885), and administered by the Jaluit Company of Hamburg till 1906. The administration was then taken over ministration was then taken over by the German coionial authorities. forming a district under the New Guinea government. Copra and phosphate are exported. The Micronesian inhabitants are skilled navigators. Pop. 15,000 (Europeans, 180).

Marshalltown, cap. of Marshall co., Iowa, U.S.A., near the Iowa R., 48 m. N.E. of Des Moines, the centro of a fine agricultural region. It has a glucose manufactory, packing establishments, and manufactures of furniture, and manufactures of furniture, machinery, engines, etc. Pop. (1910) 13,375.

Marshalsea, a prison formerly existing In Southwark, London, used latterly for debtors, and abolished in 1849. It was connected with the Marshalsea Court, held by the stoward and marshal of the king's household. It was united with the Queen's Bench and the Flect (1842). Sce Dickens, Little Dorrit; Hare, London, 1.

Marshfield, a banking city of Wood Wisconsin, U.S.A., 108 m. N.W. Milwaukce. It has trade in co., Wisconsin, of Milwaukce. lumber, and manufs. of wood-vencer, springs, mattresses, etc. Pop. (1910) 5783.

Marsh Gas. see METHANE.

vacce). The common M. M. (4, officible comedy the authors were invacce). The common M. M. (4, officible comedy the authors were invalis) is a downy plant occurring in prisoned, but were afterwards released marshes near the sea and bearing Shortly after this the intimacy becomes of roso pink flowers. A tween M. and Jonson was again interdemuleent is prepared from the root. Tupted. The former, in his preface to

The rare hispid M. M. (A. hirsuta) is the only other British species.

Marshman, John Clark (1794-1877) an Euglish educationist, son Joshua (d. 1837). He becamo official Bengali translator, accompanying his father to Scrampur (1800), and directing his religious undertakings after 1812. He started a paper-mill, and with his father founded the Bengali Sumachar Durpun (1818), and the English weekly, Friend of India (1821). His Guide to the Civil Law was (before Macaulay's work) for long the civil code of India. Other works were a Dictionary of the Bengalee Language, 1827-28; History of India (to Dalhousle's administration), 1863-67; Life and Times of tion), 1863-67; Laje and Times of Carey, Marshman, and Ward, 1859. See Times (July 10, 1877); Hunter, Gazetteer of India, under 'Serampur.' Marsh Marigold, or Callha palusfris, a handsomo plant with large kidney-

shaped, glossy leaves and golden-yellow sepals, the petals being yellow sepals, the petals being absent. Common in watery places.

Marsh's Apparatus, see Arsenic.
Marsh's Apparatus, see Arsenic.
Marsi, a brave and warlike people of the Sabellian race, dwelt in the centre of Italy. Their bravery was proverblal. They were the prime movers of the celebrated war waged against Rome by the Socii or Italian allies in order to obtain the Romsu franchise, and which is known by the name of the Marsio or Social War. Their chief town was Marruvium. They were regarded as magicians.

Marsico Nuovo, a com. and tn. of Potenza prov., S. Italy, 16 m, S.W. of Potenza. Pop. about 6300. Marsivan, or Merzitun, a Turkish tn. in the Amasia sanjak of Sivas vilayet, Asia Minor, at the foot of the Tavshan Dagh, 85 m. S.S.E. of Sinope. It contains many missionary schools. There are silver mines and vineyards near, and hot baths at Khavza. Pop. 15,000.

Marske-by-the-Sea, a watering-place on the N. coast of Yorkshire (North Riding), England, 2 m. S.E. of Redcar, with ironstone quarries. Pop. about 3000.

Marston, John (1575-1634),dramatist and satirie poet. As carly as 1601 he was satirised under the name of Demctrius, in Ben Jonson's Poetaster. Howover, ln 1605 M. dedicated to Jonson, with expressions of affection and esteem. The Malcontent. In the same year he was assisted by Jonson and Chapman in Marsh Mallow, or Althwa, a genus the composition of Eastward Hoe. For of biennials or perennials (ordor Mal-some reflections against the Scots in

his Sophonisba, hints at the plagiar attached. To his only remaining isms from Roman authors in the friend and literary executor, Mrs. Catiline and Sejanus of the latter. Louise Chandler Moulton, he dediwith little of the imitative and incated True Friend and True Poet. Louise Chandler Moulton, he dediwently genius of the dramatist, M. Almost immediately previous to his had much of the spirited vigour and pungent wit of the satirist. In the periodicals. His poems are gloomy and in accounting but full of intensity of the satirist. pungent wit of the satirist. In the Scourge of Villainy, he is lofty and intropid in his censure of vice, but is often carried by his vehoment inveo-

Marston

intropid in his censure of vice, but is often carried by his vehoment invective to the very verge of coarseness and indecency. His other works are: The Medamorphosis of Pigmalian, a satire, 1598; Antonio and Melida, a tragedy, 1602; The Dutch Courtesan, a comedy, 1606; Parasitaster, a comedy, 1606; What You Will, a comedy, 1606; What You Will, a comedy, 1607; The Insatiate Countess, a tragedy, 1613.

Marston, Dr. John Westland (1819-90), a dramatio poet, born at Boston, Ilincolnshire, tho son of Rev. Stephen M., Baptist minister. Ho left the legal professon for literature and the theatre, and became acquainted with Heraud, Francis Barham, John Tobin, Sheridan Knowles, and other dramatists. He contributed to Heraud's magazine, The Sunbeam, and became celtor of a mystical periodical, The Psyche. He became acquainted with Eleanor Jane Potts, the eldest daughter of the proprietor of Saunders News Letter, a intimator acquainted with Lieanor Jane Power, the eldest daughter of the proprietor of Saunders' News Letter, an intimacy resulting in marriage in 1840. His first play, The Patrician's Daughter (1841), brought out by Macready, was (1841), brought out by Macready was accompanied with a prologue by Dickens. His next, The Heart of the World (1847), was a failure, but Strathmore (1849) obtained a great success. Among his many dramas are: Marie de Meranic, 1850; Anna Blake, 1852; A Life's Ransom, 1857; A Hard Struggle, 1858: Pure Gold, 1863; Donna Diana, 1864; The Favourite of Fortune, 1866; A Hero of Romance, 1867; Broken Spells, 1873; and Under Fire, 1885. He was joint-editor of the National Magazine in 1837, end contributor to the in 1837, and contributor to the Athenaum in 1863. His plays lack vitality, but as a critic he oxcelled over original composition. In 1863 he received the degree of LL.D. from the University of Glasgow. A collection of his dramatic works was edited by himself in 1876.

Marston, Philip Bourke (1850-87), an English poot, born in London. He was tho only son of Dr. Westland M. His life was one of successive was the only son of Dr. Westland Marsuplalia' in American Naturalist, M. His life was one of successive 1901; Beddard, Mammalia, 1902. misfortunes, and through an accident received during childhood he lost his sight at an early agc. Soon after his first poem, Song Time, was published he lost his sister, Ciccly (1878), full music. Thereupon M. challenged his amanuensis, followed in 1882 by Apollo to a musical contest, the conthe death of his poetic ally, Gabriel Rossetti, to whom he was greatly should do what he pleased with the

in conception, but full of intensity of feeling.

Marston Moor (Yorkshire), Battle of, fought on July 2, 1644, between the Royalists, under Prince Rupert and the Earl of Newcastle, and the Parliamentarians, commanded by Lord Fairfax, Earl of Manchester, and Cromwell. In this battle the Royalists were completely routed.

Marstrand, a scaport in. of Sweden, situated about 20 m. N.W. of Gothenburg, on an island in the Categat. It is a favourite summer resort for visitors. Pop. 1700.

Marsupials (from Lat. marsupium,

pouch), an important subdivision of mammals, also called Didelphia or Metatheria, often ranked with mono-Metatheria, often ranked with mono-tremes or placentals. The name 'Marsuplalia' (introduced by Tyson about 1698) is derived from the characteristic ventral pouch of skin supported by two epipuble bones in which the young, who are born very imperfectly developed after a short period of gestation, are carried and nourished by the females. Existing M. are mainly restricted to the Australian and Austro-Malayan re-gions. The three main divisions are: (1) Polyprotodontia (America and (1) Polyprotodontia (America and (1) Polyprotodontia (America and Austraiasia), including the Dideiphyldæ (American opossums), dasyures, the thylacine or Tasmanian wolf, M. moles (Notoryctes typhlops), and bandicoots. They are mostly carnivorous and insectivorous, and tho pouch is often absent. (2) Taucituberculata (exclusively S. American. tuberculata (exclusively S. American, tuberculata (exclusivoly S. Allicham, of the family Epanorthidae). (3) Diprotodontia (Australasian, and a few in E. Austro-Malayan Is.), including the wombat, koala, or sloth, cusous, kangaroo (Macropodidae family), wallaby, and phalanger. These are wallaby, and phalanger. These are herbivorous, and represent the most highly evolved forms of the M. See Gould, Mammals of Australia, 1845-63; Thomas, Brit. Mus. Catal. of

1887; Bensley, 'On Australian Marsuplalia' in American Naturalisi,

The Muses decided in! vanquished. ranquisicu. The Muses decided in favour of Apollo, who bound M. to a tree and flayed him alive. His blood was the source of the R. Marsyas. There is a statue of M. In the forum of Rome. See Ovid Medam. vi. 382-399, and Frazer in Adonis, Attis, and Ching of the principles. Osiris, chap. vi.

Martaban, a tn. of Lower Burma, on the Salwin R., 10 m. N.W. of Maulmain. Formerly the capital of

Peru and a place of importance.

Martaban, Gulf of, an inlet of the
Bay of Bengal. It receives the three
rivers — Irawadi, Sittaung, and Salwin.

Martel, MARTEL. Charles, CHARLES see

Martel de Janville, see Grp. Martelli, Pier Jacopo (1665-1727), an Italian dramatist, born at Bologna. Here, in 1707, he was appointed professor of eloquence. Hc wrote a religious poem, entitled Degli Occhi di Gesù, and several tragedies, comedies, and farces. His collected works appeared at Bologna in 1733, and Cloglera wrote his blography in the Opuscoli, ii., 1729. M. employed the Alexandrine verse rather than the Italian form in most

of his works.

Martello Towers, round towers formerly used in English coast defence. The name is derived from Mortella Point in Corsica. In 1794 an English fleet, under Lord Hood, supported the Corsican insurgents. and a small round tower near Corsica withstood their fierce cannonadc. The strong resistance shown by this tower led to ones of a similar nature being erected along the English shores, especially on the southern shores, especially on and castern coasts. They are about 40 ft. high and sltuated on the beach. Nowadays they are coneldered obsoletc.

Marten (Mustcla), the name given to a number of animals of the weasel to a number of animas of the weaser family, but applying specially to the Pine M. and the Beech or Stone M. (M. foina). The Pine M. still occurs in the N. of England and Scotland. In shape it resembles a stoat, but its body is much longer, the tail alone being often a foot long, the legs are short and the parsy haves hear clayed. short, and the paws have sharp, clawed digits. The fur is a beautiful dark brown with a large yellow patch on the breast. The Beech M. or Stone M. of the S. of Europe (with a white patch) supplies the fur trade with stouc or baum M. skins. Other species include the Pekan, the American N., and the Sablo (q.v.). The Foul M., or Foumart, is the Pole Cat (q.v.). All the Ms. are arboreal, frequenting con-iferous woods where a nest of leaves or moss is made, and feeding on small animals and birds. If taken young,

Ms. arc casily tamed, and the Beech M. was kept in Athens and Rome to eatch micc.

Marten, a com. in prov. of West-phalia, Prussia, 4 m. W. of Dortmund Pop. 11,613.

Martensen, Hans Lassen (1808-84).

theology at this place. In 1854 he became Bishop of Seeland (the highest position in the Danish Church), after having been court preacher since 1845. Among his works are: Mester Eckart. 1840, an essay on middle age mysticism: 1849; A 1872. See. 1841; Susten

his autobiography (German trans, Aus meinen Leben, 1884. Martha's Vineyard, an island in the Atlantic Ocean off Massachusetts, U.S.A., 23 m. long. It forms the greater part of Duke co., and was se named by the Goswold oxpedition on account of the excessive growth of

vincs. Pop. (1910) 4600. Martialis, M. Valerius (b. c. 40 A.D.) an oplgrammatic poet, born at Blibilis in Spain. He came to Rome in 66; in Spain. Ho came to rome m vo, and after residing in the metropolis thirty-five years, he returned to the place of his birth in 100. His death cannot have taken place before 104. His fame was widely extended, and he secured the natronage of the he secured the patronage of the Emperors Titus and Domitlan. His extant works consist of a collection of short poems, all included under the general general appellation Epigrammata, divided into fourteen books. They are distinguished by fertility of imagination, flow of wit, and felicity of language; but they are defiled by impurity of thought and expression, and by base flattery of the Emperor Domitian. M. throws a valuable light on the social life of Rome in the 1st century of our era. The best edition of Martialis is that of Schneidewin, Unfortunately, there is no good translation of the epigrams in Eng-lish; the best working edition (in selections) is that of Bridge and Lake (1906).

Martial Law. This expression is used by writers on constitutional law in a three-fold sense: (1) The suspension of the ordinary or municipal law of a country in favour of the temporary government of the country or parts of it by military tribunals. In the Code Napoleon of France there is oxpress provision for the proclama-tion of 'a state of siege' in certain eircumstances of eivil disorder, the effect of which is that military tribunals are empowered to try civilians by military law. The absence of precedent for such course of proceeding since the Petition of Right, 1628—which inter alia complained of the enforcement of M. L. against private individuals—has led many writers to assume that it is unknown in England. But the decision of the Privy Council in the case of Marais r. General Officer Commanding, in 1902, on the appeal of a civilian, Mr. Marals, against his detention under military arrest during the S. African War, was to the effect that such arrest was justifiable on the ground that war was then raging in the eolony: and that tribunal further expressed the opinion that there never was any doubt that in time of war the ordinary courts have no jurisdiction over the action of military authorities, and that the only difficulty was to establish in particular cases when a state of rebellion or insurrection could be said to have existed. (2) The term is sometimes erroneously used to denote the com-mon law right of the crown and its servants to repel force by force in the case of any violent resistance to the iaw whether by invaders or rloters. (3) As a synonym for military law. or the law administered either (a) by the long abolished Court of Chivalry of the Earl Marshal and Lord High Constable in affairs of honour, and generally in 'matters of arms and deeds of war,' or (b) by courts-martlal at the present day in pursuance of their powers under the annually re-

16 m. S.W. of Sion. point of routes ove Bernard and the C

and is situated on the Simplon Rail-eelebrated on Nov. 11. In Scotland way, 24 m. S.E. of the Lake of this day still marks the winter term, Geneva. It has some interesting which is called Martinmas (the mass Roman remains. Alt. 1560 ft. Pop. of St. Martin).

Martigues, a scaport of France, a French historian and politician, near the Etang-de-Berres, 21 m. S.W. born at St. Quentin (Aisne). He first of Aix, in the dept. of Rhône. It is built on connected by bridges.

and lignito-mines. Pop. 5700.

Martin, a name for some members Lacre of the swallow family, but usually implying the House Martin (Chelidon urbica), which builds a mud nest under the caves of houses. It differs from the swallow chiefly in having a white band across the lower back. Other Ms. include the Sand M. (q.v.), the American Purple M., and the Fairy M. The so-called Black M. is the

Swift (q.v.). Martin, the name of five popes:

Martin I. (649-53) was banished to

Ho died in 655. He is canonised by the Greek Church.

Martin II., or improperly named Martinus I. (882-84), was sent as legate to Constantinoplo on a mission concerning the controversy excited

by Photlus Martin III., or Martinus II. (942-46), was merely a puppet of Alberie

(d. 954), a prince and senator of the Romans.

Martin IV. (1281-85) supported parles of Sioily against Peter Charles and excommunicated Aragon Michael Paleologus.

Martin V. (1417-31) was chosen pope by the Council of Constance. He ignored the reforms instituted by his predecessor, Gregory XII., and made separate concordats with Germany, France, and England.

Martin, Lady, see FAUCIT, HELENA

SAVILLE

Martin, Saint (316-400), Bishop of Tours, and a saint of the Roman Catholic Church, born in Pannonia (now Hungary). He eutered the army first under Coustantine, and afterwards under Julian the Apostate. The virtues of his life as a soldier are the theme of more than one interesting legend. On obtaining his discharge from inilitary service, M. became a disciple of Hilary, Bishop of Poitiers. On his return to Gaul about 360, he founded a convent of monks near Poitiers, where he led a life of austerity and seclusion; but in 371 he was drawn newed Army Act of 1881 to deal with all matters of military discipline.

Martigny, three united hamlets in literary relie of M. is a short Conthe can on of Vali

is published by Galland, vol. 9. In the Roman Catholio the festival of his birth is

Martin, Bon Louis Henri (1810-83),

as a notary, but soon gave the study of history and He wrote A History of

Fran Fran and I Ma·. trans rey. at R

that rema

trans from the Latin Vulgate, the first edition appearing at Rheims; Martin I. (649-53) was banished to printed at Antwerp in 1600; revised Kherson by the Emperor Heraclius by Bishop Challoner (1749-50), and for his opposition to the Monothelites. reprinted by George Leo Haydock in 1812, and Husenbeth in 1850.

Martin, Sir George (1764-1847), a British admlral, youngest son of William M. (d. 1766). He was present at the battle of Grenada, July 6, 1779, and was promoted to the rank of lleutenant and command of the Russell. In 1797, in command of the Irresistible of seventy-four guns, ho took part in the hattle off the Cape of St. Vincent. In the following year he was appointed to the command of the Northumberland, and assisted in the capture of the Generoux, Feb. 18, 1800. He was made vice-admiral in July 1810, and received the order of St. Januarius from the King of Naples in 1814. Ho received many honours, and was promoted to the rank of admiral of the fleet in Nov. 1876. He married twice, but died 1876. without issue.

Martin, John (1789-1854), an English painter, born in the neighbourhood of Hexham, Northumberland, went to London in 1806, and after went to London in 1806, and after obscure struggles managed to have his picture 'Sadak in Search of the Waters of Ohlivion,' hung in the Royal Academy (1812), this attracted considerable attention. The principal productions are: Belshazzar's Feast'; Creation'; 'The 'Creation'; 'The 'Morning' and 'Ever Man'; Expulsion from Paradise.' Man'; Expulsion from Paradise.' Mi, died at Douglas, Ise of Man. Martineau, Harriet (1802-76), an author, suffered in youth from bad author; suffered in youth from bad aut

father's profession. In 1846 he set up as a parliamentary agent, and soon acquired a large practice and amassed considerable wealth. In 1851 he married Helen Faucit, the actress. was early attracted to letters, and with Aytoun wrote the Bon Gaultier Ballads (1842-44), a series of parodics after the style of Rejected Addresses, but inferior to that collection. also wrote essays on the drama and on actors, and made many translations from the German and other ianguages, as well as a biography of Lord Lyndhurst (1883). In 1866 he was hyndrurst (1883). In 1800 ne was invited to write the official Life of the Prince Consort, which task he undertook. The work was published in five volumes (1875-80). For this service he was created C.B. In 1878 and K.C.B. in 1880. The blography was a eulogy of the Prince Consort, and presented his Royal Highness in a clearer light than that in which, save by the few be had been seen. My was hy the few, he had been seen. M. was registrar of the Royal Literary Fund from 1871 to 1907.

Martin, Sir Thomas Byam (1773-

1854), a British admiral and third son

by Frederick Charles for many years commissioner at Portsmouth, and afterwards comptroller of the navy. He received his training at the Royal Naval College, Portsmouth. On Nov. 23, 1790, he was promoted to be lieutenant of the Canada, and took part in several small hattles. He organised the attack npon the Russian fleet while attached to the Swedish navy. He represented Plymouth in parliament from 1818-31, and rose to the rank of vice-

admiral of the fieet in 1849.
Martin, William (c. 1767-1810), an English naturalist, born at Mansfield, Nottinghamshire. He is famed for its works on British fossils: Petrifasia derbiensia; or, Figures and Descrip-tions of Petrifactions collected in Derbyshire (1804), and Outlines of Extraneous Fossils on Scientific Principles (1809).

Martina-Franca, a tn. In the prev. of Leece, Italy, 17 m. N.N.E. of Taranto. Has a fine ducal palace.

Pop. 25,000. Martineau, Harriet (1802-76), an author; suffered in youth from bad

a theological novel. Devotional Exercises appeared in 1823, Traditions of Palestine in 1830. Between 1832-31 she brought out in nine volumes Illustratic

followed

Paupers of Taxation. She wrote a History of England during the Thirty Years' War (1849) and a work on Household Education. She had the journalist's capacity for 'getting up' any subject, and issued heoks on mesmerism (1845) and the British Rule in India (1857) with equal facility and un-She was the hounded confidence. author of several storics. Perhaps the best thing she wrote was Feats on the Fiord. Her autohiography was pub-

lishod in 1877.
Martineau, James (1805–1900),
Martineau, James (1805–1900) Unitarian theologian, younger brother of the above, born at Norwich-Possessed of considerable inventive and mathematical talents, he was originally intended for engineering, hut studied for the Unitarian ministry, to which he was ordained in 1828. After serving as paster in various places he became in 1840 professer of mental and meral philosophy in the Manchester New Cellege of Sir Henry Martin, Bart. Ho was! (subsequently removed to London). and principal, in 1869-85. Among his writings, which were very influential, are: Rationale of Religious Inquiry, 1836; Ideal Substitutes for God, 1879; Study of Spinoza, 1882; Types of Ethical Theory, 1885; Study of Religion, 1888; Seat of Authority in Religion, 1890; and religious poems and hymns. M. was a man of very elevated character and powerful intellect; of great acuteness, candour, and openness to now ideas. He was D.D. of Edinhurgh, 1884, and D.C.L. of Oxford, 1888. Martinez de la Rosa, Francisco

(1789-1862), a Spanish statesman and man of letters, horn in Granada. He took part in the national cause when Spain was invaded by France (1808) by heing sent to Gihraltar to negothate with the British government, who aided him, and so caused the French to evacuate Madrid by the victory of Bailen. In 1809 he came to England in order to study the in-stitutions. In 1812 Martinez was elected deputy to represent Granada In the Cortes, whore he identified himself with the Liberal cause as to raise the hostility of Fordinard VII., who banished him to Gomera in Africa for ten years, but he was recalled by the revolution of Riego (1820). In 1820 he was again elected to represent Granada, and in 1821 he undertook to form a ministry, but he had to resign in June the same year and took refuge in France, where he continued to reside for about eight years, during which time he occupied himself in writing. In 1833 Martinez was recalled to Spain to form a ministry but soon resigned. He held various political offices until 1861twice being chief minister. One of his ministries is famous in the history

Martinengo, a tn. of Italy in the prov. of Bergamo, 10 m. S.S.E. of Bergamo. Pop. (com.) 5000.

Martinezia, a genus of small palms with pinnate leaves. M. carvotæfolia is a handsome stovehouse plant.

Martini, Ferdinando (b. 1841), lo ac-

n at her's and

wrote essays, novels, and proverb-plays in the style of Alfred do Musset. In 1879 he founded the Fanjulia della Domenica. From 1892-93 he was lacked vigour. Minister of Education in the Giolitti Cabinet.

Martini, Frederic (1832-97), a Swiss engineer, was Hungarian hy birth and Swiss by adoption. After serving in the Austrian army in the war of 1859, he established machine works at Frauenfeld in Switzerland. Here in 1871 he invented the breech-loading mechanism of the rifle which bears his name-the Martini-Henry. Henry was the name of the inventor of tho barrei.

Martini, Giovanni Battlsta (1706-84), a Franciscan monk, commonly called Padre M., and celebrated as a writer on music. His chief works are: Saggio di Contrapunto, 1774-75 (essay on counterpoint), and Gloria

Musica, 1757-81, a work in three volumes on the history of music. Martinique, an island of the Windward group, W. Indies, belonging to France. It is very irregular in form, and is about 50 m. in length from N.W. to S.E., by about 15 m. in mean hreadth. Area 382 sq. m. The surface is uneven and mountainous, and has soveral volcanoes. The highest point in the island is the volcane Mont Pelee which rises to the height of 4450 ft. An cruption of this volcano in 1902 destroyed the town of St. Pierre with all its inhabitants, somo 26,000 lives being lost. The principal productions are sugar, eofice, cocoa, ctc., the trade amounting to about £1,500,000 amounting to about £1,500,000 annually. The coast, being indented by numerous bays and inicts, affords many good harbours. Fort de France is the chiof town and the political capital. It is also the principal naval station of Franco in the W. Indles. M., the native name of which is Madiana, was discovered by the Spaniards in 1493, and colonised by the French in 1635. It was taken by the French in 1635. of Spain by the treaty with Lord the English in 1762, and again in

ne English in 1762, and again in 194 and 1809; and was finally given p to France in 1814. Pop. 182,000. Martinmas, the feast of St. Martin 'Tours, Nov. 11, and in Scot land one the four term-days for paying rent. Martino, Edouardo de, a marine ninter, horn at Malta, near Naples. and appointed marine painter in ordinary to Queen Victoria in 1875, when he came to England. His works include sketches taken during the Paraguayan War, and four plotures of the battle of Trafalgar.

Martino, Simone di (1283-1344), an Italian painter, born at Siena, and of

Martinsberg, a tn. of Hungary, 12 m. S.E. of Raab. Celebrated for its

Benedictine abbey, which has been I in existence for nino centuries. It has a fine library and n rare collection of Pop. 3000. archives.

Martinsburg: 1. A bor. in Blair co., Penusylvania, U.S.A., in a fertile valley known as Morrison's Cove, 15 m. S. by E. of Altoona Pop. (1910) 1200. 2. Atn. of W. Virginia, U.S.A., co. seat of Berkeley co., 65 m. N.W. of Washington. Pop. (1910) 10,698.

Martin's Ferry, a hanking city of Belmont co., Ohlo, U.S.A., 2 m. from Wheeling. Coal isfound in ahundance, and there are engine and machine works, glass works, tin mills, etc. Pop.

(1910) 9133.

Martius, Karl Friedrich Philipp von (1794-1868), a German naturalist and traveller, born and educated at Erlangen. In 1817 he went to Brazil langen. with an exploring expedition sent out by the governments of Austria and Bavaria. He was nominally in chargo of the botanical department, but his account of his travels (published in 3 volumes) includes observations in ethnography and general Ho afterwards became science. director of the Botanic Garden (1820) and professor of botany (1826) at Munloh. Among his works are: His-toria Naturalis Palmarum, 1823-53; Reise nach Brasilien, 1824-31; Nova Genera et Species Plantarum, 1824-32; Icones Plantarum Cryptogamicarum, 1825-31, etc.

Martos, a tn. of Andalusia, Spain, 10 in. W.S.W. of Jaen, on a steep bill. Noted for its wines and mineral waters. Pop. 16,500.

Martyn, Henry (1781-1812), an English missionary, born at Truro, who after a brilliant career at Cambridge in mathematics and classles came under the influence of the famous preacher, Rev. Charles Simeon. In 1805 holeft for India as he decided to devote his life to the work of a missionary. At Dinapore he translated the N.T. into Hindustanee, and super-Intended the Persian translation of the N.T. of N. Sabat's and Sebastiani's. At Shiraz in Persia he revised the Persian and Arabic translations of the N.T., also completed a new translation of the Psalms. He died of fever at Tokat.

Mariynia, a genus of annual and perennial plants with tuberous root stocks of the order Pedalinacee. M. fragrans is easily grown in the green-house, and bears racemes of crimsonpurple flowers followed by two-horned fruit which is used in pickles.

Martyr (Gk. μάρτυρ. or μάρτυς, a witness), a term used to designate those people who in the conflict be-Paganism and Christianity tween ragainst and conversation of their appointed tutor to Mary, daughter convictions by sacrificing their lives of Lord Fairfax, and, later, of Crom-

rather than abandon their falth. Many instances are recorded, and the number is probably exaggerated, but that there were many who suffered for the truth's sake is certain. Such persons who met their death, often in eases of the utmost heroism, were regarded with the greatest admiration hy their fellow-men, and it was considered a special privilege to reecive the benediction of a M., to visit him in prison, or to kiss his chains. Then, too, after death he was regarded as a saint, his grave was the sceno of pilgrimage, his clothes, por-tions of his hody, hooks, etc., were honoured as relies, and the day of his martyrdom was celebrated with peculiar honour as his natal or birth The first recorded M. of Christianity was Stephen, an account of whose death is given in Acts vi. and vii., and the proto-martyr of Britain was Alban of Verulam, who suffered about 286 under Diocletlan. The use of Marlyrology, a list or catalogue of Ms. or saints, arranged in the order of their anniversarles, is common to both the Latin and Greek cburch (although in the Intter it goes under a different name, i.e. menology), and was intended as a guido to the faith. ful in their devotions. The most important nneient martyrology is the Hieronymian, falsely said to have been compiled by St. Jerome, and next to this came the Lesser Roman and Bede's martyrology, the last of which has come down to us in that of Florus of Lyons; Rhahanus Maurus (c. 845); Adoof Vienne (d. 875); Usuard of Paris (c. 875), the most famous, on which the Roman martyrology was based: Notice (896), and St. Gall (912). The official 'Roman martyrology,' designed for the entire Church, was published in the time of Gregory XIII. (1584), and two years later Baronius published an annotated edition. The hest known list of the Greek Church, or 'menology,' was that compiled by order of the Em-peror Basil, the Macedonian, in the 9th century. This was edited in 1727 by Cardinal Urbini. In 1866 Mr. Wright, in the Journal of Sacred Literature, published a Syriae martyrology which had been written about 412. Marugame, a scaport of Japan, 80 m. W.S.W. of Kobe, on the island of Shikoku. Pop. 25,000.

Maruts, Vedic storm and wind gods, companions of Indra. In ancient mythology the sons of Rudra and Prisni, in later the sons of Kasyapa and Diti.

Marvell, Andrew (1621-78), a poet and politician, early became known for his verses, and about 1650 was

well's ward, William Dntton. and in 1657 became his assistant in the Latin secretaryship. Three years later ho was returned to parliament by Hull, and he represented that constituency until his death. In 1663 ho accompanied Lord Carlisle as secretary on a mission to the courts of Russia, Swoden, and Denmark, and published an account of tho embassy (1669). Ho wroto verses eulogising Cromwell, notably Ode upon Cromwell's Return from Ircland, and the lines Upon the Death

wrote other

members of the reigning house. He was an activo pamphicteer. Ills principal proso works are: The Rehearsal Transposed, 1672, and An Account of the Growth of Popery and Arbitrary Government in England, 1777 Williams of the County of 1777. His poems were first collected in 1681, and the hest edition is that edited by G. A. Aitken in 1892. There are biographies by Dove (1832) and Birroll (1905).

Marwar, see Jodhpur.

Marwar, see John Vie. Marx, Heinrich Karl (1818-83), the Father of Scientific Socialism '(i.e. modern as opposed to earlier or Utopian Socialism), was a German subject of Jewish extraction, born at Trèves. After starting the so suppressed Rheinische Zeitung the soon-Cologne he wont to Paris, where he was converted to Socialism by reading

and Spargo. See also ANARCHISM; INTERNATIONAL, THE; and SOCIALISM. Mary, The Virgin. tho mother of Jesus. Little is told us concerning her in the Gospel narratives. We are told of the announcement to her by the angel that she should conceive a Son by the overshadowing of the Holy Ghost, and then of the events connected with the birth of Jesus. From this we learn that she was espoused to a carpenter named Joseph, belonging to the house of David. After the events dealing with the infancy of our Lord narrated by St. Luke, we have but few mentions of her. We are told of the includent at Cana (John ii.), her presence when Jesus was preaching (Mark iil. 31), her presence at the foot of the Cross (John xix. 26), and the word of our cellor. She was brought up in the

Hel Lord consigning her to the care of made the acquaintance of Milton, St. John. Nothing is told us of her and in 1657 became his assistant in death. Tradition and legend have not shown the delicate reserve of the evangelists. The 'poisonous apocry-phal books' tell us all about the birth and childhood of the Virgin and many detalls about the birth and childhood of her Son. The tradition of her later life, death, and assumption is well known. The veneration of the Virgin Mary occupies a considerable place in the ritual of the Roman Catholio See article in Hastings' Church. Dictionary of the Bible.

Mary I. (1516-58), Queen of England, the cider daughter of Henry VIII., by his marriage to Catherine of Aragon. Like all the Tudors, she received a good education and was a distinguished linguist and scholar. Sho was brought up in the faith of the Catholic Church and nothing afterwards would induce her to be unfaithful to her religion. After the divorce of her mother, she was treated with harshness by ber father, being doprived of her rank and precedence, and made to live in a secluded, reand made to live m a sceluded, restricted manner. After her father's death, she hved in retirement, until the death of Edward VI. called her, in 1553, to the throne of England. She was the popular choice of the country and easily put down the movement in favour of Lady Jane The main conspirators were executed, and M. proceeded to restore the old religion as cautiously as sho possibly could, but finally lost her popularlty by her marriago to Philip II. of Spain. Wyatt's rebellion was quelled, but Lady Jane Grey and her came to London, which he made his husband were executed, and even the permanent home. Hereafter ho dc. Princess Elizabeth spent some tight to Tower in 1564 her marriage in the Tower. In 1554 her marriage with Philip took place, and the religion of the country was restored to that of the time of Henry VIII. Then began the period of persecutions which have given M, the title of Bloody Mary, and the reign the character of one of the blackest of

onaracter of one of the blackst of our annals. At least 300 'hereties' were put to death at the stake. Finally, in 1558, M. died, deserted by a husband to whom she had borno no children, and heartbroken by the desolateness of her life and by the loss or Calais, the last Euglish possession in France. Usually condemned as

years later sho ascended the throne of England as joint-sovereign with her husband, after the revolution of 1688. Her husband had a great affection for her, and trusted her with the government of the country during his absences on the Continent and elsewhere. She died in 1694 of small-

pox, leaving no children. Mary (Queen Consort of George V.), daughter of the Duke and Duchess of Teck. She was born at Kensing-ton Palace on May 26, 1867, and was given the names Victoria Mary Augusta Louise Olga Pauline Claudine Her early childhood and Agnes. youth was spent chiefly at the White Lodge, Richmond. In 1892 she was affianced to the heir-apparent to the throne of England, H.R.H. the Duke of Clarence. In the same year, how-ever, the Duke died, and the Princess Mary was in the following married to Prince George, then Duke of York, who had by the death of his brother become the ultimate helr to the throne. She has accompanied her husband on most of his great tours, and has become exceedingly popular throughout the empire. Her last great tour was the journey to India almost immediately after the coronation.

Mary of Guise, called also Mary of Lorraine (1515-60), the daughter of the Duke of Guise. Sho married, in 1534, the Duke of Lorraine, who, however, died in 1535. Sho next married James V. of Scotland, to whom sho bore a daughter, afterwards the farners Near Ouese. wards the famous Mary Queen of Scots. After her husband's death at Solway Moss (1542), she became regent for her week-old daughter. The times in Scotland were troublous since the Reformation party was struggling against the court party for the recognition of the Reformed religion. Mary attempted to carry out the ambitions of the French crown in Scotland, but her regency

dld not last long.
Mary Queen of Scots (1542-87), the daughter of James V. of Scotland by his marriage to his second wife Mnry of Guisc. She was born immediately after the disastrous defeat at Solway Moss (1542), and was a queen before she was a week old. Her father on his death-bed made the famous and mistaken prophecy, 'It came with a lass, 'Sho was promised to Edward VI. as wife, but finally after the battle of Pinkle married the Dauphln of France, son of Henry II. She was sent to France

Protestant faith, and was married to by the marriage treaty the crown of her cousin, William of Orange, Statholder of Holland, in 1677. Eleven the event of her dying childless, and also passed on by the same treaty her right of succession to the English erown, In 1559 her husband became the King of France, but he died in the following year. Charles IX. succeeded to the throne of France, and the real power passed into the hands of Catherine of Medici, the queen mother. In the meantime, the death of the queen mother in Scot-land, Mary of Guiso, had left the government without a head, and the presence of the young queen was urgently requested, especially since the Reformation had already gripped Scotland very closely. In 1561 she arrived in Scotland and found that the Reformation had received what it considered to be a parliamentary sanction for itself. M. did not inter-fere, in fact for a time she allowed matters to follow their previous course. She allowed the Reformed Church to continue without molesta-tion, but stipulated for a private use of her own faith. Her chief minister. Murray, succeeded in crushing an insurrection of the Catholics under the Marquis of Huntley In the north, and for a time M. reigned not only in peace but also with the approhation of her subjects. Her attention, how-ever, was next turned to her second marriage. A number of princes were proposed to her, Elizabeth of Eng-land quixotically proposing her own favourite, the Earl of Leicester. M., however, desired a Spanish marriage, and endeavoured to bring about her marriage with Don Carlos of Spain. It is important to bear in mind the fact that M. was the heiress to the English throne as well as the occupant of the Scottish, and that, therefore, in the eyes of Europe, her position and prospects were magnificent. Failing in her attempt to bring about a marriage with Don Carlos, she suddenly surprised everybody by marrying her cousin Darnley, the nearest heir after her to the throne of Erneland and Scotland. of England and Scotland was weak in character and inscient in manner; immediately after his marriage he was given the title of king, but was granted but few privileges to accompany the title. He carly disgusted M. by his frequent love' intrigues, and he in turn, failing seemingly in his attempt to gain his desires and ambitions towards the Scottish crown, began to intrigue in order to bring about these ends. He was icalous of Rizzio, the Itnlian favourite, and the practical minister of M., and eouspired with Moray, Ruthven, and Morton to at m carly age, and there her educa- Moray, Ruthven, and Morton to tion was completed. She conveyed marder hlm. This was done in Holyrood Palace on the evening of March 9, 1566. M., however, won Darnley from the conspirators, whom rood ho betrayed, and for a time their relations were friendler. Finally, after the birth of James, their son, afterwards James VI. of Scotland and I. of England, the rupture became complete, and later all Scotland was horrified to learn that the house in which Darnley laid ill of smallpox had been blown up and his body found in the garden of the house. The queen could not be directly accused of complicity, but there were many who believed that she was not alto-gether guiltiess, especially as the chief instigator of the murder had been her new favourito, Bothwell. He was brought to trial and acquitted, im-mediately after which he selzed the person of the queen and conveyed her to Dunbar, nominally a prisoner. Ali Scotland, however, had no doubt of the complicity of M. in the murder and the abduction when she publicly pardoned Bothwell, and after he had obtained a divorce married her. An insurrection immediately broke out and sho, deserted by almost all her nobles, was defeated at Carberry, nobles, was defeated at Carperry, forced to abdicate in favour of her roung son, and imprisoned in Loch Loven Castlo. From here, in 1568, she escaped, raised a small army, and was again defeated at Langside. She fied this time and placed herself under the protection of Elizabeth of Eng-ion was diffinot approve

o queen, sho M. to escape from her now, since M was ber greatest rival. M, therefore, found herself a prisoner for life. During the next inetteen years sho passed from prison to prison in England. She had many supporters in that country, and one long conspiracy was kept up during her imprisonment. One may almost safely say that Elizabeth's position was unsafe as long as M lived English in 1856 the one M. lived. Finally, in 1586, the con-spiracy of Anthony Babington was discovered, and M. was accused of complicity. The whole evidence was Casket Letters. M. denied complicity as she denied the jurisdiction of the court which tried ber. Finally, howover, she was found gullty and sentenced to death, and in February 1587 Elizabeth signed the death warrant. She was executed on Feb. 8, and died in the eyes of her followers a martyr, protesting her innocence and strong in the faith of the Catholic Church. Buried first of all at Peterborough, her body was in 1612 re-moved to Westininster Abbey by

her son James I.

Maryborough: 1. A tn. of Ireland, cap. of Queon's co., is situated on a small trib. of the Barrow, 50 m. S.W. of Dublin. It has several good public buildings. It returned two members to parliament until the Union, when it was disfranchised. It has woollen manufs. and flour mills. Pop. (1911) 3270. 2. A tn. of March co., Queensland, 184 m. N. of Brisbano. It owes its importance to the proximity of the Grand Collis minod and way by are large

of Melbourne. Gold mining is carried on, and the tn. is an important railway function, with large engineering works. Large crops of wheat and oats are grown in the surrounding district. Pop. 5675.

Mary-golds, see Calendula.

Maryland, a maritime state of the U.S.A., bounded on the N. by Pennsylvania; on the S. by Virginia, New Virginia, and Chesapeake Bay; on the E. by Delaware and the Atlantic, and on the W. by Virginia and W. Virginia. It covers a total area of 13,327 sq. m., and lies in three distinct regions, viz. the Coastal Piain, Pledinont Plateau, and Appalachian Plateau, the last named being recovered by the Distance of Westerland Plateau, the last named being traversed by the Blue and Alleghany Mts. The most important river is the Potomac, which drains the W. portion of the state. Other rivers are the Susquehanna, Patapsco, Choptank, Sassafras, Wiconico, etc. The climate varies greatly; in the S. the normal winter is mild and summer hot, whereas in the W. the normal winter is a cold condensation. winter is cold and summer cool. The state contains important coal fields and a considerable variety of solls. On the whole, the soil is well adapted for agriculture and under good cultivation. It is particularly fertile in the western countles. The chief erops Indian corn, wheat, erops are indian corn, wheat, potatoes, rye, tobacco, and fruit. The fisheries, especially of systers, are extensive. The chief town is Baltimore (pop. (1910) 558,485), but Annapolis (pop. (1910) 8609) is the seat of government. The most important industry is the manuf. of clothing. There is an excellent external from applies spheric and system of free public schools and a number of higher educational institutions. Total pop. (1910) 1,295,346. M. was named after Henrietta Maria, queen-consort of Charles I. of England. It was first explored by Capland. It was first explored by Captain John Smith in 1608. A charter granted by Charles I. to Lord Baltimore gave bim practically royal power over the region. In 1638 the people were conceded the right to initiate legislation. The assembly passed the famous Act of Toleration In 1649. In 1652 the colony was scized by the commissioners of par-liament, but was restored to Lord Baltimore in 1657. M. was one of the Spaniards in 1647. His party was thirteen original states. See Passano's History of Maryland.

Marylebone, a hor, in the N.W. quarter of London, divided into E. and W. divisions, each returning onc member to parliament. It comprises Portland Place, Regont's Park, Cavendish, Portman, Manchester, and Fitzroy Squares, and the upper part of Regent Street.

Mary Magdalene, see MAGDALENE, MARY.

Maryport, a senport of Cumberland, England, on the Ellen, 28 m. S.W. of Carlisle. So called from the landing here of Mary Queen of Scots on her flight from Scotland. Has shipbuilding yards, iron foundries, tanneries, hreweries, etc. The exports eoasist principally of eoal and iron. Pop. (1911) 11,423.

Marysville: 1. A city in Yuba co., California, U.S.A., 41 m. N. of Sacramento. It has an extensive trade, and is at the head of naviga-Has an iron foundry, woolien mills, fruit canneries, etc. Pop. (1910)

5430. 2. A post vil. of Hastings co., Ontario. Canada, 34 m. W. of Trunk

Kiagston, on the Grand Trunk Railway. Pop. 2000. Masaccio ('shiftless') (1401-28), the nickname of Thomas Guido, a Florentine painter, born in the Arno Valley. He is sometimes called the 'father of modern art,' and is celehrated for his frescoes in the Brancacci Chapel in the Carmine and in Santa Maria Novella at Florence, which have been a school of instruction for all succeeding painters. He also painted several pictures now in the Berlin Museum. See monograph by

Schmarsow, 1895. Masailand, a dist. in E. Africa, stretching W. to Victoria Nyanza, so named from the tribe of Masai who constitute the chief inhabitants. The region is of an elevated naturo, the chief mountain masses being the Kilimanjaro, Kenia, and Aberdare. It contains Lake Naivasha in the S., Lake Rudolf in the N., besides others of less note. The country is now lacluded in the British E. Africa Protectorate. The Masai are a nomad people of Negro-Hamitie stock, and speak a Nilotie language. They support themselves chiefly by cattle-See Gregory, The Great raising.

Rift Valley. Masampo, in Korea, a former free port of foreign commerce on the S.E. coast, 180 m. S.E. of Scoul. It was closed to foreign trade from Jan. 1, It was 1911.

Masaniello. properly Tommaso

the Neapolitan revolt against the Spaniards in 1647. His party was successful, and for a short time he became master of Naples. He gave himself up to despotism and excess, and was assassinated by the vicerov's agents.

Masara, Ei, a vil. of Egypt, 10 m. S. of Cairo, in the prov. of Gizeh. It is opposite the site of the ancient

Memphis and has eelebrated quarries.

Masaya, tn. of Nicaragua, 13 m.

W.N.W. of Granada, near the lake, and at the foot of the volcane, both

of the same name. Pop. 15,000.

Masbate, one of the Philippino Is.,
S. of Luzon and W. of Samar. Length
60 m., breadth 20 m., and it covers
an area of 1230 sq. m. Gold is found, and it is very fertile, yielding tobacco, gums, resins, etc. The chief tn. is Masbate. Pop. of Island 44,000.
Mascagni, Pietro (b. 1863), an

Italian operatic composer, horn in Leghorn, was educated there and at tile academy in Milan. He was first manager of a travelling opera com-pany, then manager of a musical society at Perlgnola near Naples. His first opera, In Filanda (1881) created no impression, but his next work, a one act opera, Cavalleria Rusticana (written for a prize compotition), made him world famous; thls was first staged in Rome on May 17, 1890. His other works are: U'Amico Fritz, 1891; Ralcliff, 1894; Zanctto, Silvano (both 1895); Iris, 1898. Mascara, a tn. of Algeria, 45 m.

S.E. of Oran. The former residence of Ahd-el-Kader, it was destroyed by the French in 1853 and occupied by them in 1841. Pop. 21,000. Mascarene Islands, a group com-

prising Mauritius, Réunion, and Rod-riguez Is. in the Indian Ocean. Réunion was discovered in 1545 by the

Portuguese, Mascarenhas, who called the group after himself. Mas-d'Azil, Le, a tn. in dept. of Ariège, France, 12 m. W.S.W. of Ariege, France, 12 m. W.S.W. of Pamlers. Has an interesting cavern in a limestoao hill, forming a natural tunnel, and a grotto with prehistorie remains. Pop. about 2000.

Masdevallia, a genus of epiphytal chids. The three sepals of the flowers are brightly coloured, and their points are extended into long tails. They are borne singly, in most cases, on a scape which springs from the base of the stalk of the stout

leathery lance-shaped leaves.
Masefield, John, an English writer.
He is notable as one of the pioneers in
the revival of the long narrative poem in English. His works include: Salt-Water Ballads, 1902; Ballads, 1903; A Mainsail Haul, 1905; On the War (play): Multitude and Solitude (novel), 1909; The Street of To-day (novel); Poems and Ballads, 1910; William Shakespeare: The Encylastical William Shakespeare; The Everlasting

Mercy (poem); Dauber (poem), 1913.
Maseres, Francis (1731-1824), an English mathematician, historian, and reformer, born in London. 1752 ho graduated at Cambridge, and six years later was called to the bar. He acted as attorney general of Quebec from 1766-69, and from 1773-Newscarful Tob-19, and from 1773-\$4 was baron of the exchequer. His publications include, Doctrine of Per-mutations and Combinations; Dis-scriation on the Use of the Negative Sign in Algebra; Scriptores Optici; 4 View of the English Constitution, etc. Charles Lamb in his Old Benchers of the Inner Temple introduces Maseres.

Maseru, a dist. of Basutoland.
Chief tn. and settlement of the dist.
is Maseru, 100 m. N.N.E. of Aliwal
North. Pop. 1300 (200 whites).
Masham, a small tn. in the N.
Ridling of Yorkshire, England, 8 m.
N.W. of Richards the North Posts

N.W. of Ripon, on the North-Eastern Railway, and on the R. Ure. Pop. (1911) 3110.

Masham, Abigail (d. 1734), was daughter of Francis Hill, a merchant of London, who married the sister of

relative. ured her to the ined her

situation after the princess ascended the throne, and acquired great infinence over her. Miss Hill married Mr. Masham (son of Sir Francis Masham, of Otes in Essex) in 1707. Harley, afterwards carl of Oxford, connected himself with the new favourite; a change of ministry took place, and in 1711 Mr. Masham was rulsed to the necessar. He and his raised to the peerage. wife appear to have He and his engaged in intrigues in favour of the Stuarts.

tribes are the Mashonas, a peace-loving people. Our earliest informa-tion of the country records the settle-ment of the Bantu negroes, in the 10th century, whose hereditary chief, Monomatapa, had his capital in M. The people appear to have entered into a commercial treaty with the Portuguese. But through a succession of tribal wars they lost eohesion. The next we hear is of the Matabele, an offshoot of the Zulus. whose chief, Mosilikatga, entered into rites the normal service a treaty with the governor of Cape terror in the service service, and Colony. From about 1816 to 1870 the use of marks in the service cere-

Spanish Main; Lurists of the Restoration; Essays Moral and Polite; A the Mashonas and other Makalanga Sailor's Garland, 1906; Captain tribes. A pioneer force was sent into Margaret (novel); The Tragedy of M. under Colonel Pennetather, and War (play); Multitude and Solitude settled on the sites which are now the (novel), 1909; The Street of To-day (novel); Poems and Ballads, 1910; Charter. A dispute with the Portuguistic ways of Salisbury. Victoria, and Charter. A dispute with the Portuguistic ways who glained a street of territory was who glained a street of territory. guese, who claimed a tract of territory, was settled by force of arms in which the British S. African Police were the victors. The Matabele resented British occupation, with the result that Dr. Jameson, Major Forbes, and Allan Wilson raided their native kraals. Wilson and his force were slain as the result of the Shangani R. rising and preventing reinforcements. Lobengula, their chief, dicd in 1894, thus quelling for a while the Matabele spirit. They and the Mashonas revolted, however, in 1896, but their resistance gave way in 1897. The first meeting of the Rhodesian Constitution was held at Salis desir

national unity. Industrious and generally peacoful, they make very successful farmers. They oxcel in Industrious and They oxcel in the crafts, the smelting and forging of iron, in pottery, and weaving. They are good hunters, fond of music, and use the bow and arrow, assegai, and

use the bow and arrow, assegal, and axe. The Mashonas were anciently supposed to bo the builders of the ruins of Zimbabwa, which show that a large population at one time inhabited Southern Rhodesia. Pop. 480,000, including 9000 Europeans. See J. T. Bent's Ruined Cities of Mashonaland, 1892.

Maside a com in prov. of Opense.

Maside, a com. in prov. of Orensc, Spain, 10 m. N.W. of Orensc. Pop. about 6500.

Masinissa (c. 238-149 B.C.), King of the Numidians, ruler of the Massy-lians in Eastern Numidia, and later King of Numidia. He fought in the second Punic War, first as an ally of the Carthaginians, and afterwards of the Romans, when he served with Scipio against Syphax (201-203) and in 202 at the battle of Zama. He reigned till 148 B.C., and was given most of Syphax's territory after the conquest of Carthage

Mask (Fr. masque, from Lat. mascus, masca, spectre), an artificial covering for the face, in divers forms, and worn for various reasons. disguise the mask is generally associated with the artificial faces worn by actors in the Roman theatres, a custom transmitted by them to the Italian stage of the middle ages, and also practised in the English masque of Elizabethan times. In savage monies is common among the Indian, African, and Eskimo tribes. In the case of death-masks, the term is used for portrait casts, eitber of plaster or metallic foil, taken from the face of a dead person. Masquerade is a variation of the same word, used for masked balls or entertainments of a like nature, where the personages are

disguised. Maskelyne, Novil (1732 - 1811),graduated at Trinity College, Cambridge, in 1754. In 1755 he took orders, but be bad previously been In 1755 he took led to turn his attention to astronomy by the solar eclipso of 1748. In 1761 he went to St. Helena to observe the transit of Vonus, and to detect, if possible, the parallax of the fixed stars. In 1764, he acquired that knowledge of nautical astronomy which led to the formation of the Nautical Almanac. In 1765 he was appointed astronomer-royal. Delambre dates the commencement of modern astronomical observation from M., who

nomical observation from M., who first gave a standard eat alogue of stars.
Mason, Alfred Edward Woolley (b. 1865), novelist, has written many storles, of whileb the best are: The Courtship of Maurice Buckler (1896), Miranda of the Balcony (1899), both of which have been dramatised by the author; The Four Feathers (1902), Running Water (1907), and The Broken Road (1907). These novels are all in the romantie vein. His comedy, Colonel Smith, was produced in 1909. M. sat in the Liberal interest for Coventry in the House of in 1909. M. sat in the Liberal interest for Coventry in the House of Commons from 1906 until 1910, when he retired from active participation in politics.

Mason, George Heming (1818-72), an English painter; spent some years in Rome, and whilst in that city painted his 'Ploughing in the pagna. His finest paintings The Evening Hymn (1868) 'Harvest Moon' (1872), both Campagna.' (1868) scenes from his native Staffordshire.

Mason, John (1586-1635), governor of Newfoundland in 1606. In 1622 he obtained grants in Mariana (now N. Massachusetts) and the province of Maine, and in 1629 in New Hampshire and Laconia. Buried in West-

minster Abbey. Mason, Sir Josiah (1795-1881), an English pen-manufacturor; began life as a street-bawker, and after many and varied experiments set up a facproved eminently successful. Ho endowed an orphanage at Erdington,

He was a profound admirer of Gray, wbo praised his dull classical tragedy Caractacus (1759), but pointed out also his plagiarisms and his grammatical and other blundors. M. edited the Life and Letters of Gray (1774).

Mason and Dixon's Line, the boundary line (lat. 39° 43′ 26°3″ N.) separating Maryland from Pennsyl-Mason and Dixon were two English astronomers who surveyed it between 1763 and 1767, and thus put an end to the disputes between the Baltimores and Penns, the respectivo proprietors of the two colonies. This line was part of the boundary between free and slave (Northern and Sontbern) states. Since 1820 it has been a popular name for the whole of that boundary.

Mason City, the cap. of Cerro Gordo co., Iowa, U.S.A., 115 m. N.N.E. of Des Moines. Its chief manufs. are bricks, cement, and tiles. It has also foundries and machine shops. Pop.

(1910) 11,230. Masonry, the art of building in stone in a similar manner to building in brick; the fundamental difference between masonry and brickwork (q.v.) being that in the former that stones are of irregular and beterogencous shape and size, as opposed to the uniform mass of bricks. This renders it very difficult in many cases to obtain a bond in the work, and the walls in most cases must be thicker than briek walls. Masonry, how-ever, from these features, is better suited to imposing and beautiful structures, as work of greater pro-jection can be included than is pos-sible in brickwork. The art of masonry is of great antiquity, the pyramids of Egypt being berhaps the most noteworthy examples in the world of masonry without mortar. The tools which a mason uses in-clude squares, hammers, boasters, chisels, saws, ung inammers, saws, axes, picks, wedges, nippers, trammel heads, otc. The manner in which the stones are treated, either before or after building, is described in various technical terms. Scrab. bling is taking off the salient angular projections of the stone; when the latter is used in this condition the work is called 'rustlo' work. Ham

for making steel pens, which stone which has been roughly leveued. whilst plain work has been more accurately smoothed. Combcd work has been treated by a steel scraper or comb'; boasted or droned work and also Mason College, which is now been treated by a steel scraper or a part of Birmingham University.

Mason, William (c. 1724 - 97), an bas parallel chisel marks, which do not oxtend quito across the surface, College, Cambridge. From 1754 he held various livings in the Church.

stone, moulded work is work formed! with a change of curvature, whilst chisel draughted margins are smooth narrow spaces enclosing corbed, logist; entered the Ecolo Normale boasted, or piain work. Rubbed Supére of Paris in 1865, and bework is rubbed with another st and with sand, water, etc., wl polished work is brought to a l polish. When the foundation

Tock, tho walis can be begun at once, year 1000-01, when he was in Egypt When there is a firm subsoil large at the head of an archæological misflat stones having a greater super-sion, which afterwards became the ficial area than the walls themselves Institut Français de l'Archéologie must form the foundation, and where Oriental. In 1881 he discovered many the ground is marshy, piles sur-mounted by a concrete foundation courso are necessary. All joints in M. must ho at right angles to the

pressure which they have to bear. Stone walls may be divided into three main classes, according to the manner in which the stones are set up: ruhhle, block in course, and ashlar. The first category includes many and various methods, of which many and various memous, or most the chief are known as flint, random rubble set dry, random rubble set in mortar, Kentish rag, random rubble bullt in courses, uncoursed, squared or 'sneoked' rubble built up to courses, and regular coursed rubble. Rubble as a generic term means thinly hedded stone, generally less than 9 in. in depth; when it is of irregular shape it is 'random,' when squared into shape it is said to be 'coursed.' The various kinds of rubble walls thus explain their composition by their names. In random rubblo set in mortar the bond is obtained by using one bond stone in every superficial yard in the face. In flint work, windows and door-dressings, and training one control by the bridge. and groins, are set with brick or squared stone for strength and appearance. 'Kentish rag' is built of a kind of unstratified sandstone which is found largely in Kent, and the blocks of which are usually roughly dressed to a polygonal form. Sneeks ' are small stones which are inserted where required in snecked rubble to prevent long vertical joints. Block in course work is made of stones largor than those used for coursed rubble, with hammer-dressed faces, squared and brought to a good joint; it resembles good coursed rubble or ashlar, and is very strong and durable. Ashlar is the name given to carefully worked stones of more than 12 in.; owing to its heavy cost ashlar built in cement mortar, and brought to a level at every bedjoint of the described as a ashlar, the facing of which may be plain, rebated, or chamfered. See Inigo Jones often designed these enery, 1909; C. F. and G. F. Mitchell, Brickwork and Masonry, 1908.

Masonry, Free, see FREEMASONRY.

royai sarcophagi at Deir-el-Bahari. and he made further discoveries in clearing the Templo of Karnak. M. founded and directed the Recueil de travaux, but his most valuable publication is Histoire ancienne des peuples de l'Orient classique, 1894-1900.

Masque was a species of dramatic entertalnment which reached highest popularity in the reign of James I., but which was also a favourite diversion at the courts of Henry VIII. and Elizabeth. 'Essential masque,' says the Rev. Ronald Bayne, 'was tho appeal of the moment to the eye and the car, the biaze of colour and light, the mist of perfumo, the succession of rapidly changing scenes and tahleaux, crowded with wonderful and beautiful figures. Many look to Italy for the origin of the M., but it seems at least likely that it grew out of the 'mummings' which are heard of in England as early as 1377. The growth of opera accounts for the speedy waning of the M.; in the latter pageantry and spectacular display were of supreme importance, whilst in the former these were rightly subordinated first of all to musle and then also to characterdrawing and plot. Ms. were played commonly before royalty and in the homes of the nobility. Thus Daule! Vision of the Twelve Goddesses was produced at Hampton Court in 1604, shortly after James's accessionwhen, be lt noted, Queen Anne and her when, be it noted, Queen aline and her ladies were the masquers—and The Masque of Queens of Ben Jonson was presented at Whitehall in 1609. The Hymenesi, also by Jonson, was performed in 1606 to celebrate the marriage of Essex with Frances Howard, whilst his Pleasure Reconsider to Weene was played at court ciled to Vertue was played at court on Twelfth-night in 1618. It was this backed either by brickwork or libretto of Jonson, the great master ble. The backing should be of the literary n Milton's Comus

dances were specially arranged by professors of the art. Money, time, and thought were freely lavished, the sole aim of the inventor being to multiply his gorgeous effects, and to make the spectacle as full and varied as he could.

Masquerade, a festive gathering, the participators in which all assume some disguise. The name suggests that when Ms. first came into vogue, the masque was a necessary part of the disguiso. Ms. first appoared in England in the reign of Henry VIII.: they were introduced into France by Catharine de' Medici. Fancy-dress belis are, it would seem, their modern development.

Mass, the term used in physics to denote the quantity of matter in a body. Weight (q.r.), with which it should not be confused, is proportioned to M. See Weight, Gravitation, Acceleration, Inertia, and

DYNAMICS. Mass (Lot. Missa), refers now to the Eucharist service of the Roman Catholic Church. It is held to be a real offering in which Christ is the victim, and commemorates the crucifixion. Of old, the Eucharist service always included the communion of the faithful, while now only the officiating priest communicates. M. now may he either Low, Chanted, or M. High. In the first a priest attended by acolytes reads the service; in the second the service is chanted, not read; and in the third the priest is assisted by deacons, subdeacons, and ministers. The M. includes, of course, the consecration, clovation, breaking, and communion of the Host and of the Chalice. The officiating priest wears five peculiar vestments, of which the colours vary with the occasion. A similar service is held by the Greek and Oriental churches.

Credo, S .

Dei all But the

very many more words than the other portions of the service, and the difficulty which confronts the composer is to avoid emphasising them in a way whoily disproportionate to their religious significance. St. Gregory collected many of the unisonal plainsong melodies. The beautiful Missa Papæ Marcelli of Palestrina averted the condemnation of polypholic music which the Council of Trent was about to pass. Mozartand Haydn were mosters of the instrumental mass, whilst the symptonic is exquisitely represented by Beethoven's a great factor in New England education. The famous War of Independation. The famous War of Independation of the way was commenced in M., and the

e Carrara, Italy, 26 m. N.W. of Piss, near the Gulf of Genoo. It is here that the Carrara murble quarries are, and silk is also manufactured. Por. (com.) 26,500.

Massa Lombarda, a vii. 181 m. W. of Ravenna, Italy. Pop. 3000.

Massachusetts, one of the N.E. Massachusetts, one of the Nassachusetts, of U.S.A., often calied the Bay State. Area 8266 sq. m. One of the thirteen original states. Bounded on the W. by Vermont, N. by Key Hampshire, and S. by Connecticut and Rhode Island. Eastern shores were had be the Adaptic. Fine profes. washed by the Atlantic. Fine rocky coast with many bays, the largest Boston Bay and Harbour. The beautifui Berkshire hills are a feveurite summer resort. Inlend the country riscs graduolly, and numerous small lakes are a merked feature of the iandseapc. The climate is temperate, and the beauty of the spring and autumn in M. is notable. Agriculture was, in the first part of the last cen-, the primary industry, but io the middle and latter part a great tide of emigration towards the western states took place. To-day it is essentially a manufacturing state, the cotton and boots and shoes industrles being of prior importance; but a large trade is done in weolien and worsted goods, paper manufac-turing and sugar-refining. Boston, a great seaport and the oldest in America, is the capital. Other towns are Gloucester, just boyend which lie the great cod fisheries; Lowell, centre of cotton industry; Plymenth, where the Pilgrim Fathers landed (1620); and Fall R., a large scaport on Mt. Hope Bay, 50 m. from Boston. The Puritan ancestry has still a marked effect on the inhabitants of this state. effect on the inhabitants of this state, which is vory conservative, and which has not been flooded, like the western states, by German immigration. In Mass, the Music of, has naturally heen very largely influenced by the nature of the text. The Kyrie, Gloria, and later the great Unitarien movements in the statement of the text. its carly days it procured a bad nome

made its headquerters in Bes-The imports are large, and there great and growing export trade with England and Canodo. The Boston, New York, and Newhoren Railway follows the coast-line, and connects with the New York military ranway follows the coast-ino, and connects with the New York railway systems. The Boston Central Railway terminus is one of the lorgest railway terminl in the world. The educational system is the best possible, and Harvard and Boston Universities are world forces. The Massa-

victories of Lexington and Bunker's city, 271 m. S.W. of Siena in the Hill settled the fato of America. In prov. of Grosseto, Italy. Zinc and the war of N. aud S., M. was the state lignite are mined. Pop. (com.) 18,000. Massena, a vil. 35 m. N.E. of feeling against slavery being very crosses. The state is well growned. strong. The state is well governed, and has a reputation for oulture and advanced thought. It is one of the most populous of the New England states, and its power and influence is second only to New York state. Pop. (1910) 3,366,416.

Massachusetts, North American aborigines, memhers of the Algon-quin family. The original inhabitants of the state which bears their name. Only a small reinnant remains of the tribe, a low type of humanity and irresponsive to educational and

religious influences.

Massa e Carrara, a prov. in N.W. Tuscany, Italy, having part of its S.W. coast washed by the Mediter-Pop. rancan. Area 687 sq. m. 220,000.

Massafra, a tn. in the prov. of Lecce, Italy, 10 m. N.W. of Taranto.

Pop. 11,000.

Massage may be looked upon as artificial exercise, applied in illnesses and convalescence, when the usual innumerable movements of the hody exciting tissue metabolism are in abeyance or impossible. The operator, passeur, masseur, masseuse, placing the patient in suitable positions, proceeds to ald movements of the limbs and joints; to stroke, pinch, press, knead the muscles. By this means the small muscles, cell tissue of all kinds, capillaries, cto., are agitated, and normal waste and repair of the healthy body promoted. M. has hecome a distinct branch of the medical art, and careful training as well as expert knowledge is essential for the trained operator, many of whom are Swedes or trained in Swedish schools. A modern extension is the application of vibration, especially to joints in cases of rhoumatoid affections, by mechanical or electric vibrators. The mechanical or electric vibrators. treatment has become usual in nervous ailments such as selatica, neuritis, neuralgia, in insomnia, aud after fracture of a limb. It has become usual as a treatment for obesity, and as exhilaration or refreshment of the body in cases of persons of sedentary occupations, when it is taken in conjunction with the Turkish bath. It has always been used by atluctes, and was in regular use among the Grecks.

Massagetee, a warlike people of Central Asia, N. of the Jaxartes (the Araxes of Herodotus) and the Sea of Aral. It was in an expedition against them that Cyrus the Great was defeated and slain.

Chief industries are York, U.S.A.

connected with flour, lumber, paper, aluminium. Pop. (1910) 2951.
Massena, André, Duc de Rivoll, Prince d'Essling (1756-1817), a French marshal, was a wine merchant's son. In 1775 he joined the Rayal-Italien. In 1775 he populated Royal-Italien. In 1795 he captured Oneglio and drove the Piedmontese from the heights of Saorgio. The following year he cnabled Schercr to win the battle of Loano against the Austrians and Sardinians. So brilliant were his successes during the cam-paign of 1796-97 that Napoleon called him 'L'enfant chéri de la Victoire. From that time onward, till he was repulsed by Wellington in Spain (1810-11), his career was one long triumphal progress, and honours fell thick and fast upon him. In 1805 he received his marshal's baton. Having assured to Joseph Bonaparto the possession of the Reapolitan crown (1806), he was put in command of the left wing of the 'Grand Armée' in Poland, and was accorded the title of Due de Rivoll for the splendid services he rendered against the Russian foe. His proudest title, that of Prince d'Essling, was given in recognition of his brilliunt generalship at Eckmühl, Essling, and Wagram. After his Spanish campaign (1811), the failure of which he attributed with some justice to the insubordination of Ney, Junot, and other of his lleutenants, M. was never again entrusted with any responsible command. It is any responsible command. better to forget the greed, averice, and lax morality which characterised his private life, and to remember only his military genlus, which ranks with the highest.

Massenet, Jules Emile Frédéric (1842-1912), a French compeser, attended the Paris Conservatoire, and wen the Grand Prix de Rome in 1863. His orchestral suites, eutitled Scines de Bal and Scines Hongroises, were composed during travels in Germany and Hungary. Among his song books are Poèmes d'arril, Poèmes d'un soir, and Chanson des bois d'Amaranthe. The following of his dramatic works have heen performed at the Opéra Comique: Manon (1884), perhaps the most popular; Werther (1893), and Sapho (1897); whilst Le Cid (1885) and Thais (1894) were first produced at the Opéra. This indefatigable comraixes of Herodotus) and the Sea of poser has also written two beautiful cal. It was in an expedition against em that Cyrus the Great was deted and slain.

Massa-Marittima, a small cathedral (1902) nobly illustrates the grace,

Massey, Geraid (1828-1907), a poet, born near Tring, Herts. As a hoy he worked in a silk factory, but in 1843 he came to London, where he was taken up by Maurico and Kingsley. His first hook was published in 1851 and this was followed by four others: a selection from these was published a sciection from these was published in 1889, entitled My Lyrical Life. Later he wrote and lectured on spiritualism, and produced prose works on the origin of myths and mysteries in The Bool of Beginnings. 1881; The Natural Genesis, 1883; and Ancient Egypt: the Light of the World, 1907. Ho also wrote a hook on the sonnets of Shakespeare.

Massicot, yellow oxide of lead, the monoxide, PbO, sp. gr. 9.3., occurs native, but generally prepared by heating lead or white lead in air up to about 600° C. Mostly used in the manufacture of red lead, the dloxide,

and as a pigment.

Massillon, a city of Stark co., Ohio, U.S.A., 50 m. S. by E. of Clevelaud. In this region large quantitles of coal are found and white sandstone is quarried. It is also engaged in blast-ing and iron manuf. Pop. (1910) 13,879.

Massilion, Jean Baptiste (1663-1742), a French bishop, joined the congregation of the Oratory, and after lecturing at Pézenas and Mont-brison, entered the priesthood at Vienne in 1692. Seven years later, at the king's own request, he preached the Advent sermons at Versailles. The greater part of his life was passed in Paris, where he was principal of tho seminary of Saint Maglolre, but in 1717 he accepted the bishopric of Clermont. His sermons were remark. able for their tender compassion and for their freedom from dogmatic disputation; among the finest are those on Thesmall number of the Chosen, on on Thesmall number of the Chosen, on The death of the Sinner, and on The Prodigal Son. Among his contemporaries he was famous because he had pronounced the funeral oration on Louis XIV. Posterity cherishes his Petit Caréme, a volume of sermons preached before Louis XV.

Massinger, Philip (1583 – 1640), a dramatist, came to London about 1606, and soon acquired fame as a playwright. In his carlier days, from

playwright. In his earlier days, from 1613, he wrote in collaboration with John Fletcher until the death of the latter twelve years later, and one of

wealth of melody, and charming The Emperor of the East, The Rene-emotionalism of his music.

Massey, Gerald (1828-1907), a poet, born near Tring, Herts. As a hoy lee worked in a silk factory, but in 1843

The Guardian, The Bashful Lover, and The City Madam. The best collection of his works is that edited by Cunningham (1867). According to Lamb, M. wrote' with that equability of all the passions that made his Eaglish style the purest and most free from violent metaphors and harsh constructions of any of the drama-tists who were his contemporaries.' M.'s knowledge of the technique of the drama was great, but, while the construction of his plays leaves little to be desired, his characters are often lifeless.

Massingham, Henry William (b. 1860), an English journalist, was educated under Dr. Jessop at Norwich Grammar School. After serving on the staff of two local newspapers, the Norfolk News and the Daily Press Norwich, he acted as editor in turn of the National Press Agency, the Star, the Daily Chronicle, and since 1907 of the Nation. He has been the special parliamentary representative of the Daily News, and has published Labour and Protection.

Masson, a vil. on the Canadian Pacific Railway in Labelle co., Quebec, Canada.

Masson, Antoine (1636 - 1700), 8 French engraver and painter, born near Orleans. He hecame engraverin-ordinary to the king. His engrav-ings excel in the representation of colour and texture, but are marked by a peculiar style of executing hair. His original portraits are of considerable merit. One of his best prints is

Titian's Disciples at Emmaus.

Masson, David (1822-1907), a man of letters, began his literary career in 1844 with an article in Fraser's Magazine. Three years later he settled in London and contributed to many reviews. In 1853 ho was appointed professor of English literature at University College, London, and in 1865 he went to Edinburgh University to occupy the same chair. From 1859 for eighteen years he edited Macmillan's Magazine. During many years he was engaged upon a monu-mental Life of Millon, narrated in connection with the political, eccle-sistical, and literary history of his time, the six volumes of which appeared between 1859 and 1880. In 1874 he edited the poetical works of their most successful efforts was Two Milton, and he edited also the works of Milton, and he edited also the works of Goldsmit (1869) and Do Qulnery (1890). In 1893 he was appointed historlographer-royal for Scotland. Written by M. alone are: The Duke of There is no blography, but Memories Milan, The Bondman, The Parliament of London in the Forlies (1908) is of Love, The Roman Actor, The Picture,

Masson, (1819-88), born in London; educated at Tours, graduating in the Université de France in 1837; came to England as a tutor, 1847. Ho was French master at Harrow School (1855-88) and Vaughan Ilbrarian from 1869. He contributed to the Athenœum and the Saturday Review, and issued: La Lyre Française, 1867; Early Chronicles of Europe and France, 1879; The Huguenots, 1881.

Massonia, a genus of hulhous plants (order Liliacea). M. amygdalina is aimond scented.

Massorah, a term applied to a body of work on the Hebrew O.T. It was the work of a body of trained scholars, named Massoretes, and consists of two parts. The Massoretic text, which is represented by all our which is represented by all our Hebrew MSS, has for its object the preservation of the traditional con-sonantal text and the fixing of its pronunciation by the most scrupu-iously careful system of vovel-points and accents. The compilation of notes, to which the namo M is usually provided and with difficulties may notes, to which the namo M. is usually applied, deals with difficulties and peculiarities of the text and with variant readings. From the 6th to the 9th centuries the M. is anonymous, hut in the 10th century it is connected with the names of Ben Asher of Tiherias and Ben Naphthali. See Jacob ben Hayyim's Bomberg Bible, 1524; Elias Levita's Massoreth had-Massoreth (both translated and edited by Ginsburg), 1867; Buxtori's Tiberias, 1620; and Ginsburg's citition of the Massorah (4 vols.), edition of the Massorah (4 vols.), 1880-1906; the Massoratic edition of the Hebrew Bible (1894); and the introduction to this (1897).

Massowah, or Massaua, a fortified seaport, cap. of the Italian colony of Eritrea, Abyssinia, on a small sterile coral island in the Red Sea, I m. in circumference and 200 yds, from the mainland. It is connected with the mainland. It is connected with the shore by an embalkment containing the water conduit. There is a good harbour between the island and the mainland, and an active trade is carried on with Arabla, Suez, India, etc. It is the chiof port for Abyssinia and the Sudan, and exports pearls, lvory, ostrich feathers, jewels, coffee, tohacco, lides, etc. It is very hot and unhealthy. Pop. 8000 (about 600 Europeans).

Europeans).
Master: 1. The chief or president of a society, guild, corporation, or association, as the Master of Trinity College, the master of a masonlo lodge (see FREEMASONRY), the Master of the Stationers' Company, and the Grand Contract, Frauds, Statute Ofl. Master of Malta. 2. In the navy, an In the absence of express or implied officer who ranks immediately above terms or custom to the contrary, a lieutenant, and who navigates the most classes of servants are under-

George Joseph Gustave ship under the direction of the cap-an educational writer, tain. 3. In commercial navigation. the captain of the ship (skipper is used in the Mcrehant Shipping Act for the captain of a fishing vessel), or person entrusted with the care and navigation of the ship and cargo. He must be a properly qualified person, and upon him is the responsibility of having a proper crow and equipment. He enjoys very wide powers, e.g. he may hypothecato, sell, tranship, or jettison the cargo when oiroumstances warrant any such course or courses being taken (see Bottomay, HYPOTHECATION, RESPONDENTIA). He has the same rights as an ordinary seaman, e.g. a maritime llen, to re-cover his wages and disbursements made within his authority as M. See also MERCHANT SHIPPING

Master and Servant. The relationship of master and servant has been profoundly altered during the last century by the passing of the Factory Acts, the Employers' Liability Act, Workmen's Compensation Acts, Truck Acts, Minimum Wage Acts, and the Acts repealing the combination laws (see under all these specific titles). Formerly the relationship, though nominally contractual, was purely one-sided, the servant perforce accepting as the inovitable incidents of hisservice all thechances of sickness, accident, sweated labour, and low ship of master and servant has been accident, sweated labour, and low pay. At the present day, though there is still room for considerable amelloration, the position of a servant, so far as precautions for his safety and hygienic surroundings, and (in some cases) the rate of his wages are concases) the rate of his wages are con-cerned, marks a great advance in social reform. There is, however, one outstanding and continuing disad-vantage which seems to be almost inherent in most contracts of service other than those backed by the powerful sanction of a trade union boycott, and that is, that a servant has no guarantee that he will not be dismissed at a moment's notice, or, at all events, at such notice as gives him but little time or opportunity of seeking a fresh situation. Whether this matter will ever be remedied depends entirely upon how far future public opinion is prepared to endorse those socialistic ideas which would limit the controlling power of capital in the interests of labour in such a way as to introduce a real mutuality.
The terms of a contract of service

may be either oral or in writing, unless the term of service exceeds one year, when the contract to be enforceable must be in writing (see Contract, Frauds, Statute of).

neither party can terminate the contract before the year has expired. For the most part, however, the length of notice is ruled by trade custom, which may vary in different cases, e.g. domestie servants are as a rule entitled to one month's notice or to a month's wages in licu of notice. Grooms and stablemen paid by the week are probably entitled to a week's notice, even though nothing is said on either side as to the term of the engagement. Clerks engaged by the week or month or paid by the week or month are entitled to a week's or month's notice respectively, but if employed at a yearly salary, a clerk is, according to a popular notion, entitled in the absence of custom to the contrary to three months' notice, at whatever intervals of time his salary may happen to be paid. Apparently commercial travellers, tutors, governesses, assistant schoolmasters, sub-editors, and reporters are entitled to three months' notice, but it is generally understood that news agency pressmen in the law courts are only entitled to one month's notice. Editors are entitled to six months' notice as a general to six months' notice as a general rulo. Obviously it is to the advantage of the servant to get the length of notice expressed in the contract if he can, rather than leave the matter to the uncertain decision of a jury. It is to be understood that no notice is required in the case of dismissal for disobaldience to ease of dismissal for disobedience to proper orders, dishonest orders, incompetency, dishonest conduct, manent disablement, and, generally, conduct incompatible with his duties towards the master. The question of what conduct is incompatible with dnty depends on the facts of each particular case; a seaman could get drunk in public off duty but not, for example, a schoolmaster.

example, a schoolmaster.

The wrongful termination by a master of the engagement renders him liable to an action of damages for wrongful dismissal; but in the great majority of cases the action is next to useless, for the measure of damages is no more than the loss of pay during the period for which notice ought to have been given; and this will not ordinarily be a very high rate except in the case of well-noid comexcept in the case of well-paid commission agents, managing directors, and the like. There is no obligation on a master to give reasons for dis-missal unless called upon to justify his action in a court of law. In the case of domestic servants it is to be

stood to be employed for a year, and tracts of service with infant employees, see Contracts, Infanct. Under the Truck Acts, a master is forbidden to pay manual workers' wagesingoods or kind; but these Acts do not apply to agricultural labourers (whose low rate of wages is accounted for partly by the fact that they live practically rent free). domestic servants, and a few others. Fines may not be inflicted on a servant as a rule, except by express agreement, though it is obvious most servants have no volce in the matter. Legally women employees and young persous (under eighteen) can only be fined, if at all, up to the amount of damage sustained by the employer through the employer's delinquency.

The contract of service implies a number of duties on either side. The master is bound to indemnify the servant against all responsibility for acts done in the course of employment and ostensibly for the benefit of the master: while conversely, the master is liable for everything hisservant does is liable for everything hisservant does in such circumstanees (for qui facil per alium facil per se). A servant may not make a secret profit at his master's expense (see Commission, Secret). A master is not bound to pay the cost of medical attendance for his servant, though, as a rule, well-to-do masters have done so in the past. Since the passing of the National Insurance Act many have thought themselves justified in abstaining from the moral duty. But staining from the moral duty. in any case, a master must continue the payment of wages to a servant during merely temporary sickacs. As to a master's statutory liability generally for injuries sustained by his servant in the course of employment (see under Employers' Liability and WORKMEN'S COMPENSATION).

There is no obligation on a master to give a servant a character; but If he do so he must give it in good falth. A good character given to a servant who is bad to the knowledge of the master may well render the master liable to an action for damages at the suit of a second master. Where a master suspects his servant of theft, his best course is to dismiss him without reasons if he cannot prove the theft; but if he suspects the servant of having the stolen property in his possession he should get out a search warrant from the police, for he may not himself search his servants' boxes or other private receptacles. In the bankruptey of a master, all wages or salaries of servants or clerks for services rendered during the four noted that if the master chooses to months prior to the date of the repay a month's wages instead of giving ceiving order, up to £50, and all wages notice the servant has no claim for of labourers or workmen not exceed board or maintenance. (As to con-

two months prior to that date, have priority in the distribution of assets.

Master of Arts. The university degree next above the bachelor (see Deerres in Arts). The word magister originally had the significance of 'teacher,' and the term was used in medieval universities of the holder of the licentia docenti, or right to teach. It is now mainly used in England in the faculty of arts, in England in the faculty of arts, in England in the faculty of arts, in England in the faculty of the doctor. The lis abbreviated to M.A.

to M.A.

Master of the Ceremonies. SCC Chremonies, Master of the Master of the Rolls, sec Rolls,

MASTER OF THE.

Masterton, a hor. tn. of Wairarapa North co., North Is., New Zealand, 60 m. N.E. of Wellington. Pop. 5000.

Mastic, the resin produced by a small tree (Pistacia lentiscus). It occurs in small grains or tears which are soluble in rectified spirit and oil of turpentine, and are used in the manufacture of variables.

Mastiff, a typically British dog bred to its present type for sporting purposes, but now kept only as a guard or pet. It is usually docile and good-tempered, and it is very powerful and fiercely courageous. The head is large and broad, the muzzle deep, square, and broad, the cars small, and the eyes wide apart. The fore legs are straight and strong, and the hind quarters broad and wide. Brindlo was the original colour, but fawns are common. The cars and muzzle are black, and there is black round and between the eyes.

coat is short and close.

Mastodon, a fossil primitive elephant, belonging to the Pliocene and Miceene periods, and of a simpler type than the mammoth. The name (Gk. μαστός, breast, and ὁδούς, tooth) was given by Cuvier on account of the nipple-shaped tuberculations on the Ms. have been found in many tecth. parts of the world. The earlier types, known as long-chinned Ms. (Tetrabelodon) have two pairs tusks, the lower jaw being prolonged

to support the under pair.

Arabian historian, born at Bagdad. Much of his life was spent in travel, and ho visited Persia, Ceylon, Mada-gasear, China, Palestine, Syria, and Egypt, collecting materials in every place. His chief work was Annals (30 vols.), but he is best known by his historical narrative entitled Meadows of Gold and Mines of Gems. A French translation by de Meynard was completed in 1877.

enormous army recruited from all the conquered tribes. They then settled in the rich plains between the Zam-bezi and Limpopo Rs., and estabbished a military despotism over the lesser nations. Their only occupations were war and hunting, and their frequent raids upon Mashonaland led to an ontbreak of war with Great Britain from October to November 1893, re-sulting in the defeat of the Matabele and the capture of Bulawayo. They are now engaged in cattle breeding and agriculture.

Matabeleland, or Matabililand, a country in the Interior of British S. Africa, forming a province of Southern Rhodesia. Much of the surface consists of rich plains, traversed from S.W. to N.E. by the Matoppo and Izimunte Mts., and watered by tribu-taries of the Zambezi, Lundi, and taries of the Zambezi, Lundi, and Limpopo Rs. There is much mineral wealth, especially gold. Cereals, cotton, and sugar are grown, and there are large tracts of forest, while cattle and sheep are bred in the districts free from the tsetse fly. Cap. Buluvayo. Area 70,800 sq. m. Pop. about 227,000.

Matadi, a riv. port of Belgian Congo, on l. b. of Cougo below lowest falls, opposite Vivi. The cap. of a dist. and starting place of Congo Railway. Pop. 1500 (150 Europeans).

Matador, see BULL-FIGHT.

Matagalpa, a dept. in the centre of Nicaragua. Its chief productions are coffee and tobacco. The capital is (or Matagalpa.

in the state of on the S. bank

opposito Brown-

Masûdi, Abul Hassan Ali (d. 957), an | ville, Texas. It exports hides, wool, horses, and specie. Pop. 18,000.

Matamoros Izucar, a tn. in the state of Puebla, Mexico, 36 m. S.W. of Puebla. Pop. 8000.
Matanzas: 1. A prov. of Cuba, bounded by Havana, Santa Clara, and State of Strait.

Florida Strait. Largely mountaioous especially in the N.; watered by the Yumuri, San Juan, Palma, and Sagua Rs. In the S. is the great swamp, Gran Ciénaga Occidental de Zapata. Sugar, cercals, fruit, cotton, Masulipatan, a scaport in the Zapata. Sngar, cercals, fruit, cotton, Kistua dist., Madras, British India, and tobacco are grown. Area 3700

Pop. 255,308. large sugar factories, and exports sugar and other produce. Pop. 64,385.

Matapan, Cape, in Greece, is the southernmost point of Morea, 36° 22' N. lat.

Matapedia, a vii. of Bonaventure

co., Quebec, Canada. Pop. 2000. Mataram, the cap. of the island of Lombok, Dutch East Indies, situated near the W. coast.

Matariyeh, a vil. of Lower Egypt, 5 m. N.E. of Cairo. It is built on the site of the ancient town of On or

Heliopolis. Mataro, a city in the prov. of arcelona, Spain, on the Mcditer-Barcelona, Spain, on the Mcditer-ranean. Its cluef manufs, are cotton and woollen goods, chemicals, glass,

and soap. Pop. 20,000.

Matches began to supersede the old flint and steel, or tinder box, method of obtaining fire in the early part of the 19th century. Tinder, or dried cotton fibre, had been partly replaced by paper soaked in saltpetre, and iargely by wood tipped with sulphur. In 1805 M. Chancel succeeded in rendering the erratio spark of fiint and steel unnecessary. He coated the sul-phur with a paste of chlorate of potash, sugar, and gum, which ignited on touching concentrated sulphurlo acid conveniently carried soaked in as-bestos fibro. This may be considered as the commencement of research for a chemical means of obtaining flamo simply, rapidly, and conveniently. Phosphorus, which inflames at ordinary temperatures when dry and exposed to the air, was experimented with, but with little success at first.
The 'Lucifer' was tipped with the chlorate of potash paste with antimony sulphide and ignited by friction on sand-paper. In 1827 'Congrevos' came into use, the tips being of sulphur phoraborate and sulphur phur, phosphorus, and chlorate of potash, or of phosphorus and nitre, slight friction only being required. By about 1830 commercial manufacture was started, the industry centreing in Austria and Germany. The danger attending the uso of matches igniting on slight friction and also the diseases, chiefly necrosls of the jaw, resulting from tumes in the use of phosphorus in factories, next elaimed attention. In 1845 amorphous phosphorus (q.v.) was discovered by Von Schrötter of Vienna, and used in 1855 by Lundström of Sweden in safety matches, patented in England by Bryant and May. Tho phosphorus was transferred from the M. tip to the frictional surface on tho box, friction elsewhere not igniting the M. Amorphous phosphorus is Amorphous phosphorus is innocuous in processes of manufactifactories. Germany, Austria, France,

2. Cap. of ture, but white phosphorus being above prov. on Matanzas Bay, and cheaper is still largely used. Factory the San Juan and Yumuri Rs. Has inspection, leading to strict attention inspection, leading to strict attention to cleanliness and ventilation, has improved conditions and practically removed chance of disease. It still remains, however, to find a compietely safe but equally economical substitute. In Belgium, whore M. manufacture has attained dimensions, the government offered a prize for such a substitute, which resulted in the use by many manufacturers of phosphorus sesquisul-phide. This substance is barely as satisfactory; its use may be recog-nised in Al. which require much 'striking,' and the consequent wear-ing away of the frictional surface. The chief improvements have been in minor yet quite important directions: the prevention of brittleness and breaking off of the head; the failing off of the hot 'einder' after ignition; the coating of the wood near tho head with material (formerly sulphur, now paraffin wax or stearine), so as to insure ignition of the wood; coation insure ignition of the wood; coating the lower wood with material c.g. salt), to prevent burning or too rapid burning. The vesta is practically a small taper with ignition tip. Fuses, for outdoor use in winds, at one time popular with smokers, have a further addition to the head consisting of charcoal and nitre, give a ficreely burning flame. burning flame.

Ignition paste.—The substances used are known chemically as oxidising agents, substances which readily part with oxygen, and reducing agents, or substances which readily combine with oxygen; one for the M. tlp, the other for the frictional surface. Ingredients and proportions, etc., are trade secrets or patents, but among oxidiscrs are: chlorate of potash, bi-chromate of potash, manganese peroxide, nitre, nitrate, and red oxide of lead; reducers: white and amorphons (red) phosphorus, sulphide of antimony, and certain sulphocyanides and thiosulphates. As a sample nux. ture, chlorate of potash, bichromate of potash, antimony sulphide and red lead for the M. tip; amorphous phosphorus and antimony sulphido for frictional surface. In addition gluo or dextrine, sand, powdered glass, whiting, and various colouring matters are

used.

Manufacture has attained enormous proportions and extended to many countries. The industry tends to move naturally to regions where timber is readly available; thus increasing in Norway and Sweden where pino (white and yellow) forms largely the natural forest. England and Belglum import timber and have large

France the manufacture is a farmed government monopoly; in U.S.A. taxes and duties have led to trust monopoly. Splints: of pine and aspen. The wood is worked when green, and the operation completely carried out by special and ingenious machinery, turning out millions of splints per day. Logs of calculated size are placed on a turning lathe; a knife acting on the full length and advancing at each rotation cuts off a ribbon. The ribbons are packed together and eut into long bands as broad as the length of a M. The bands are then fed into of a M. The balus are then for the a mabbin which rapidly jerks them forward, each movement being the breadth of a M., while a synchronised knife cuts completely through. The M., after being dried, are sifted and arranged by machinery and fed into frames. Another method is dipping frames. Another method is to feed them on to a running bell at to feed them on to a running bell at regular intervals, the bell being afterwards coiled. In frame or coil the M. may be double length, each end being dipped. After complete drying, they are dipped in parafiln and afterwards in the ignition paste, being finally dried again in drying chambers. This may be called the Swedish method, and is used on the continent. In Britain, V. L. Long's machinery is used which deals with blocks which are out by two slicings, vertical and are out by two slicings, vertical and horizontal. By this method practically half as many splints per day can be turned out: up to 17,000,000. Round splints are split by circular cutters in rows; from these they are pushed by rods into slightly smaller toles to a condess band; extending holes in an endless band; after dipping ln paraffin, they are carried over a synchronously moving roller covered with Ignition paste, dried, punched out, and automatically packed. Boxes: Machinery shaves off from blocks skillets of correct size and scores them ready for bending. The remaining operations of box-making, labelling, and packing are carried out by female labour with that marvellous skill and rapidity which characterises such mechanical acts when performed dally over years.
Matchlock, see FIREARMS andGUNS.

and U.S.A., also export largely.

ln navy, a term generally applied to any person who is an assistant or deputy in any work. In the navy the term is now applied only to petty officers who do not hold His Majesty's commission, e.g., boat-swain's M. In the mercantile marine, however, tho M. occupies the position of an officer in the may. The first M. ranks as the chief officer, and Is second only to the master of the vessel. Most increhant ships carry second or third

In leaves of the Brazilian holly (Her paraguariensis), an evergreen shrub, grown in 'yerbales' in Paraguay and Brazil. The best quality of M. (caa cuys) is made from the unexpanded bnds; the second (caa-miri) from leaves from which the midrib has been removed, and tho third (caa-pazu, or, yerva dos polos) from the whole leaf. The leaves are infused in water and sugar, and either milk or lemon added to the liquid, which is rather bitter in taste, but has restorative qualities

Matchuala, a tr. in the state of San Luis Potosi, Mexico, 100 m. N. of San Luis. Silver is mined in the vicinity. Pop. about 15,000.

Matchica Is., a tn. in the Marches, Italy, 22 m. W.S.W. of Macrata. Pop. (com.) 7000.

Pop. (com.) 1000.
Matera, a tn. in the prov. of Potenza, Italy, 34 m. W.N.W. of Taranto. It has a picturesque situation and is close to the troglodyte caves of Monte Scaglioso, still used as dwelling places. It manufs.

as dwelling places. It manufs. leather. Pop. 17,000.

Materialism is the philosophy of

Materialism is the philosophy of the material, as opposed to the idea-listic or spiritual, basis of life, which regards all phenomena, real and abstract, as explicable by physical science. It regards matter as the one ultimato fact, 'uncreatable as it is indestructible' (Vogt), and mind as a product of matter. The mind as a product of matter. The obvious objections are (1) that, as Caird points out, the recognition of the existence of matter presupposes the existence of mind as the medium of such recognition; and (2) that, taking e.g. imagination as one particular aspect of consclousness, the mind can originate an idea when wholly abstracted from matter, whilst matter cannot originate an idea when abstracted wholly from mind. Recent research in phymind. Recent research in phy-slology, however, certainly confirms the materialistic hypothesis of the relation between neurosis and psythus giving an enhanced value to sensuous perception as the fundamental source of cognition. But it offers no justification for the belief of the 18th century French school of sceptic encyclopedists, that mental experience, faculty, idea, and function are merely transformed M. is to be found sense-experience. in all philosophical systems, from ancient Buddhism and Greek Epicureanism and scepticism down to Gassendi, Hobbes, Locke, Hume, Comte, and Mill, and later Huxley, Spencer, and Haeokel. M. flourished in Europe during the 18th century under Do la Mettrie and Holbach as reaction against Christian Ms., and ln somo cases even a fourth. mystic idealism, and during the 19th Maté, or Paraguay Tea, tho dried contury under Moleschott and Büchner as a reaction against the idealism! of Kant and Hegel. See Sully's 'Evolution' (Ency. Brit.), Lange's History of Materialism, and G. H. Lewes's Problems of Life and Mind.

Materia Medica, a branch of medical science dealing in as complete a manner as possible with the history, preparation, properties, and uses of the materials used in medical prescriptions. In most countries there aro official publications, e.g. British Pharmacopæia, by the General Medi-cal Council. This has been rendered necessary to combat mediaval superstitious remedies as well as those of modern quacks, and indirectly is supported by law. An official list of drugs contains only those which of drugs contains only those which have passed the test of experience, and of which the knowledge is sufficient to render them safe in use. Many good drugs are introduced and in regular use before official sanction; proprietary medicines may or may not appear, but generally consist of not appear, but generally consist of official drugs in a patent compounded form. The subject of M. M. is very wide. Its most important branch deals with the preparation of drugs in the pure state, and the recognition of adulterations; this comes under the head of Pharmacy. Pharmacology, another branch, deals with the physiological action of drugs on the living body, in large and small doses, in health and disease, and of the chemical form, solution, etc., in which best administered for assimilation by the body. Toxleology conflues itself to drugs of toxic or poisonous action, and ascertains particularly the range of safe doses.' All these merge into Theradoses.' All these merge into Thera-peuties, which is the everyday business and concerns of the medical practitioner. Classification of drugs very varied and overlapping; chiefly there is the ordinary chemical arrangement, and their therapeutic action; e.g. alkaloids, salts, infusions; and tonics, sedatives, stimu-lants, etc.

Mate-Szalka, a tn. in the com. of

Szatmar, Hungary, 44 m. N.E. of Debreczin. Pop. 5500. Matfre, Ermengau (c. 1250-1322), a Provencial writer, born at Béziers; spent the latter part of his life in the monastery of Béziers. His great work, the Breviari a'Amor, was begun in 1288. It has been published in 2 vols. by Azais (1562, 1881).

Mathematics. It is impossible to class accompanion of a general part of the province of the companion of the compan

Mathematics, it is impossible to give a comprehensive definition of the subject matter of M. Its field of investigation is so large that it may be safely stated that no mathematician is an expert in all its higher branches, but only in a very few of them. Broadly speaking, anything

relating to space or number may be called M. A brief account of some of the more elementary branches will give some idea of its scope. Following the historical order, the first branches were those of arithmetie and geometry. These were invented by the Egyptians, and then greatly extended by the Greeks. The subject of arithmetic gave rise to algebra, which in its elementary stages is generalised arithmetic. Thus $7^2-3^2=(7+3)(7-3)=40$, as a statement simply shows a relation between the particular numbers 7 and 3, but when put algebraically, $a^2 - b^2 = (a + b)(a - b)$, shows that the relation is true generally for whatever numbers the symbols a and b may stand. This illustrates the trend of M. as a whole. It always seeks generality, and abhors any limitations to the generality of its statements and proofs. Algebra has statements and proofs. Algebra has now outgrown generalised arithmetic, and may be taken as a fundamental branch of M. In its primitive state, algebra confined itself to the consideration of what are termed real numbers, but further investigation showed the necessity of introducing irrational numbers. For gation showed the necessity of introducing irrational numbers. For instance, the diagonal of a square whose side is 1 in. is found to be a number which does not occur in the ordinary numerical notation, and is now denoted by $\sqrt{2}$. Negative numbers, e.g. -2, were also iniro-duced. Still the field of algebra was further extended by the intro-duction of imaginary numbers, e.g. $\sqrt{-3}$, leading to that important branch—the theory of the complex variable. Geometry made rapid proyariable. Geometry made rapid progress with the Greeks, who studied the geometry of all the common figures, and introduced the study of Conio Sections, which was to play a most important part in the development of astronomical M. under Kepler and Newton. The next important stars in the development of Kepler and Newton. The next important stage in the development of geometry was the introduction of Cartesian co-ordinates by Descartes. This brought the study of algebra and geometry into greater connection, affording a means of studying the properties of curves by the nse of algebraic expressions, and the behaviour of algebraic expressions themselves. The ideas of variable function and continuity were exfunction and continuity were ex-plained very clearly by this geocommon usc. Its subject - matter consists of the consideration of the rates of increase of functions. The study of series is also an important branch. Some fifty years ago the scries

 $\dots + (\frac{1}{2})^3 + (\frac{1}{2})^2 + \frac{1}{2} + 1 + 2 + (2)^2 \dots$ to infinity was stated in one of the books of the time to be equal to zero. Thus the necessity for the consideration of the behaviour of series arose, forming quite an impor-tant branch in itself. Of late years a great deal of thought has been given to the philosophical foundations of the subject. The calculus Introduced the problem of infinitely small quantities, and the question of the nature of infinity has been probed by Cantor and his successors. Tho whole of Euclidean geometry has been shown to rest upon an assumption, and quito consistent geometries, terned non-Euclidean, have been invented by Lobatchewsky and Riemann. It should be noted that M. as applied to the solution of problems cannot claim to be absolutely true. Conditions are always laid down, the solution being true only under these conditions, and thus M., like the rest of the selences, though in a greater degree, can ouly claim consistency. See various articles on mathematical subjects. On the consistency. See various at the mathematical subjects. On the philosophical side, see Russell, Principles of Mathematics; Poincaré, eiples of Mathematics; Science and Hypothesis; Universal Algebra. Whithead,

Mather, (1663-1728), Cotton divine and writer, born at Boston; son of Increase Mather. He was ordained in 1684, and was a minister in Boston from that time till his death. He was a considerable linguist and a prolific writer. His works laclude Magnalia Christi Americana (1702); Essays to do Good (1710); terium Americana (1718). Psal-

terium Americana (1718).
Mather, Increase (1639-1723), a
Nonconformist diviae, born at Dorchester, Mass.; educated at Harvard. In 1657 ho came to England,
and graduated the next year at
Trimity College, Dublin. He returned
to America, and was ordained at
Bostou in 1664. In 1680 he presided at the Boston Syno?, and in
1683 was instrumental in procuriae. 1683 was instrumental in procuring 1683 was instrumental in products, the refusal to give up the Boston Charter. From 1684-1701 he was President of Harvard College, and during that time came ou several missions to England. He wrote

taneously by Newton and Liebnitz. in 1851. In 1881 he was appointed a The notation of Liebnitz is the one in judge in the Queen's Bench Division judge in the Queen's Bench Division and kaighted, and becamo president of the Commercial court of that division in 1895. In 1892 he was appointed on a Royal Commission to inquire into the state of the evicted teannts in Ireland, and in 1901 was raised to the Court of Appeal.

Mathew, Theobald (1790-1856), a priest and temperance reformer, born acar Cashel, Ireland; joined the Capuchin Franciscans in Dublin, and

Capuchin Franciscans in Dublin, and took charge of a small chapel in Cork. In 1838 he signed the total abstluence pledge, and advocated the policy all over Ireland with remarkable results. In 1843 he came to London, and travelled in America during 1849-51. He worked energetically during the Irish faminc. Mathews, Charles (1776-1835), an actor, made his how in Jordon. remarkablo results.

actor; made his how in London in 1803, after a long apprenticeship to his profession in the provinces, where he had acquired a reputation as a comedian. This reputation he increased when he was established in London, where in 1828, having played long at Drury Lane and Covent Garden, he set up in management at the Adelphi Theatre. With his wife he used to tour the country and give entertainments, which be called 'At Homes,' and which were very suc-cessial. His Memoirs were published four years after his death. Mathur.

Matico

a shrub (c... of which yield a heavy pale green aromatic oil, and are used as a styptle.

aromatic oil, and are used as a stypuc.
Matilda, or Maud (1102-67), the
only daughter of Henry I. of England. Married to Henry V. of Germany, 1114, and at his death in
1125 returned to England. She
married Geoffrey of Anjou in 1128,
and by him was the mother of
Henry II. At the death of Henry I.
(1135) the barons recognised her as hls successor, and carried on an un-successful civil war with Stephen till 1142.

Matilda, Countess of Tuscany (1046-1115), the daughter of Count Boai-face III., and came into vast estates at an early age. She was twice married: to Godfrey V. of Lor-raine, and to Welf V. of Bavaria. Her life was spent in support of the popes against the Emperor of Germany in the struggle over lavesti-there. In 1074 she alded the pope against the Normaas, and in 1077 Henry IV, underwent his humiliating Mathew, Sir James Charles (1830-1908), a judge, horn at Cork; were given to the Holy Sec in 1077, graduated from Trinity College, and the grant renewed in 1102.

Dublin, 1850; entered Lineoln's Inn

Norway. Matin, Le, a Paris daily paper, founded in 1884 by Alfred Edwards as a Moderate Republican journal, devoting itself rather to the publi-cation of news from all over the world than to the propagation of political views. It published trans-lations of most of the telegrams in the London Times. According to its own advertisements of twenty years ago, it was the only French paper that received by wire and special correspondence the latest news from all parts of the world. It has always opened its columns to all shades of opinion, whether republican, radical, or bonapartist, a fact which was amply proved during the Floquel affair and the subsequent election of M. Meline (q.v.). Among its contribu-tors were Emmanuel Arène, Granier de Cassagnae, Cornély, Vallès, Ranc, Jules Simon, Des Houx, and Scholl. Edwards sold the paper in 1895, when

Matins, see Breviary.
Matiya, a tn. of prov. Assiut, Upper
Egypt, on left bank of Nile, 129 m.

its price became 5 centimes.

S. of Cairo. Pop. 7000. Matlock, a ta. of Derbyshire, England, on R. Derwent, 15 m. N.W. of Derby. It is picturesquely situated on the slope, and at the bottom of the narrow and heautiful Derwent valley, and is surrounded by mountain scenery. It has famous hot springs, and in the neighbourhood aro stalactite caves, petrifying wells, and lead mines. Pop. (1911) 6746. Adjoining Matiock to the S. is Matlock Bath, with numerous hydropathic establishments. Pop. (1911) 1802.

Matoppo Hills traverse Matabeleland, British S. Africa. In this range, about 30 m. from Bulawayo, is the tomb of Cecil Rhodes.

Matricaria, a genus of composite plants with leaves much divided into narrow segments, and white ligulate ray florets in a single row. M.

chamomilla is the wild chamomile. Matsukata, Marquis Masayo Masayoshi (b. 1835), a Japanese statesman, born in Satsuma. After the revolution which ended in the overthrow of the Shogunatl, he was appointed a local governor. In 1870 he received an appointment in the central government and helped to carry out the Land Tax Reform. He was appointed Minister

MATILDA, Queen of Denmark and His works include reports on various financial and economic subjects and on currency.

Matsumai, see Fukuyama. Matsumoto, a tn. of Honshlu, Japan, 115 m. W.N.W. of Tokyo. Pop. 35,000.

Matsushima, or Shiogamo-no-Matsushimo, a pine-clad archlpelago in Sendai Bay, E. coast of Shikoku,

Japan, famous for its beauty. One of the 'San-Kei' of Japan.

Matsuya, a tn. of Shimane pre-fecture, Hondo, Japan, near W. coast, with famous paper manufs. Pop. 35,081.

Matsuzaka, a tn. of Shikoku, Japan, 155 m. S.W. of Kobe. Its port, Mitsu, 4 m. distant, is on the Inland Sea. Pop. 44,000. Matsuzaka, a tn. of Honshiu, Japan,

on the S.E. coast, 58 m. S.E. of Kioto. Pop. 12,000.

Matsys, or Massys, Quentin (1466-1530), a Flemish painter, boru at Louvala; supposed to have been a blacksmith. In 1491 he necume a member of the Guild of St. Luke in Antwerp. His work is mainly religious, but includes some fine porand is marked by finished traits. smoothness, attention to detail, and expression, feeling, and reverent together with a lack of atmosphere and a certain exaggeration of gestures indicative of character or emotion.

Matteawan, a vii. of Dutchess co., New York, U.S.A., 1 m. E. of the Hudson R. Pop. (1910) 6727.
Mattei, Tito (b. 1841), an Italian composer, born near Naples; became professor in the Santa Cecilia Academy Roma in 1858 and offer. Academy, Rome, in 1858, and after leaving the Continent settled in London in 1865 and became con-ductor at Her Majesty's Theatre. ductor at Her Majesty's Theatre. His work includes popular operas, ballets, and planoforto music.

Matter, in philosophy, a term with on main uses. Aristotlo distintwo main uses. guished hetween M. (τλη) and form (ξιδος). Ho considered M. as being void of form, as the ύλη πράτη. The concrete unity, το σύνολον, coasists of form and M. When we remember that for Aristotle the form of a body is closely connected with the soul, the principle of life, we see that the Aristotellan uso is not violently opposed to the ordinary use in which M. Is considered as opposed to mind. The problem of the distinction be tween mind and M. was rendered of Homo Affalrs in 1880; Minister prominent in modern philosophy by the opposition made by Descartes again Minister of Finance, 1895; Between M., res catensa, measurable Premier and Minister of Finance, 1896; and again Minister of Finance, 1898-1900. He was mainly responsible for the introduction into the Japanese empire of the gold standard.

to the interpretation of knowledge. name is due to the formation of the In his Pure Reason he says, 'The undetermined object of an empirical intuition is called phenomenon. That in 1865 by Whymper, Lord Douglas, which in the phenomenon corresponds to the sensation, I term its "matter"; but that which effects that the content of the phenomenon can be arranged under certain relations, I call its "term"?

"form." Matter, in physics, is the name given to that out of which all objects external to the mind are thought to The nature of M. be composed. belongs to the realm of speculation, and thus nothing definite is known. Its properties, which are sense perceptions, consist chiefly of the following: It is indestructible, this property forming the basis of all chemical theory and processes; it possesses inertia, that property of a body by which it maintains its state of rest which it maintains its state of rest or of uniform motion unless com-pelled by an external agency to change that state, and it is the vehicle of energy. Various theories as to the constitution of M. have been formulated. The first is that due originally to Lucretius, known as the Atomio Hypothesis, which states that matter consists ultimately of that matter consists ultimately of very minute particles, which are incapable of further subdivision. assumption of the existence of the cther has led to several interesting hypotheses. There is Kelvin's Vortex Theory which regards the atom as a vortex ring in the ether. Reynolds has formulated the Granular Hypothesis. The more recont advances in the study of electric waves, and radio-activity seem to show that M. is really a manifestation of electricity. Larmor conceived the atom as a number of electrical units, called electrons, in rapid orbital motion. The negatively electrified corpuscies of Sir J. J. Thomson were identified with the above electrons, and thus on this electron theory M. is a manifestation of electricity. Thomson has confirmed experimentally that mass is an othereal phenomenon. But clearly the throne in 1633, and ruled with farther back. M. has been explained were the establishment of a printing in terms of ether, but it still remains press (1652), the codilication of the to show the nature of the ether. The law, and the translation of the general properties of M., such as Bible into Walachian. elasticity, capillarity, viscosity, in Matthew of Westminster, a legenderia, etc., are classified in natural ary 15th century Benedictine monk philosophy as 'the properties of and chronicler, to whom the Flores matter' more from the standpoint Historiarum was formerly assigned of convenience than as forming a This Ms. was probably compiled by distinct branch in itself.

Matterborn or Mont Cervin. a Westminster of a printing in terms of the codilication of the translation of the translation of the translation of the constitution of the codilication of the constitution of the translation of the translation of the codilication of the codilicatio

Matthews

ship to St. Matthew is founded on the words of Papias that 'Matthew com-posed the oracles (λογία) of the Lord in the Hehrew tongue and each interpreted them as he was able.' This cannot refer to our Gospel, for it is certain that this work is an original Greek composition, and not a translation from the Hebrew or the Aramaic. Some have, therefore, been led to doubt the veracity of Papias, but this is rendered unnecessary by the very probable theory as to the 'oracles of the Lord' recently given (see Logia). Our Gospel is composed from the two main sources: (1) St. Mark's Gospel or the earlier form of it known as the *Ur-Markus*; (2) a source common to St. Matthew and St. Luke known as Q. It is extremely difficult to secure a probable date for the first Gospel. Harnack dates it from 70-75 A.D., except certain later additions. It is generally placed somewhere in the last quarter of the first century. It is almost certain that St. Matthew was not its author. The Gospei is characterised first by the number of its quotations from the O.T., emphasing the Messianic character of Christ's work, secondly, by its arrangement of the subjectmatter in groups. Thus we have a collection of discourse in the resistance of the subject was the collection of discourse in the resistance of the subject. matter in groups. Thus we have a collection of discourses in chs. v.vtii., of miracles in chs. viii. and ix., of parables in ch. xiii. Much more attention is given to our Lord's discourses than in the Marcan narrative. See Commentaries by Th. Zahn (1903), W. C. Allon (1907), and article in Hastings' Dictionary of Bible, where full bibliography is given

full bibliography is given.
Matthew, Basarab, (d. haspodar of Walachia. B He came to this only moves the difficulty a little much wisdom. Among his reforms farther back. M. has been explained were the establishment of a printing

of convenience than as forming a little of the pennine Alps, in the large of the Pennine Alps, in the Central Zone of the Middle Alps, on lated by Yongc in 1853, and edited by the borders of Valais, Switzerland, Luard in the Rolls Series. 1890.

Matthews, James Brander (b. 1852), an American man of letters, born at

New Orleans; educated at Columbia College, New York. He first entered tho legal profession but soon left it for literary work. He is a member of the American Academy of Arts and Letters; was a founder of the American Copyright League, the Dunlap Society, and the Simplified Spelling Board; was decorated with French Legion of Honour in 1907, and became president of the Modern Language Association of America in 1910. His published works, comprislug fiction, criticism, and drama, etc., include: French Dramatists of ctc., include: French Dramauss of the 19th Century; Vignettes of Man-hattan, His Father's Son; Introduction to the Study of American Literature; Americanisms and Briticisms; Aspects of Fiction; Pen and Ink; Studies of the Stage; Tales of Fantasy and Fact. etc.

Matthias Corvinus (1443-90), King of Hungary, born at Klausenburg, the son of John Hunyady; elected king In 1458. He was not crowned till 1464, after a long struggle against the Turks, the Bohemians, Emperor Frederick III., and hostlie factions at home. His reign was marked by a series of wars. In 1468 ho con-quered Bosnia, and in 1467 Moldavia and Wallachia, and in 1478 con-cluded a peace with Ladislaus of Bohomia by which ho gained Moravia, Silesia, and Lusatia. In 1485, during a war with Frederick III., he captured Vienna and made himself master of much of Austria. He was a great military tactician and a prudent bett abble or well as a product of the company of but arbitrary ruler, promoting in-dustry and commerce and regulating justice and finance. He was a liberal patron of learning and founded tho University of Budapest and a fine library

Matthiola, a genus of erueiferous herbs or shrubs which has given rise to various valuable garden plants, Including the ten-week, night-scented, Brompton, queen, and wallflowerleaved stock. M. incana and M.

sinuata are British natives.

Matthisson, Fredrich von (1761-1831), n German poet, born in Hollendodeleben, near Magdeburg. In 1778 he went to Halle University to study theology, which he soon gave np and took up philology and literature. From 1751-84 he was professor of economics at Dessau. In 1787 he published his poems which were praised by Schiller and Wieland. A collected edition of his writings was published in Zürich (1825-29), 8 vols.

Mattock, or Grub-axe, a form of plek-axo with one end of the metal head pointed or shaped to an axe-like blade, and the other with a blade like that of an adze. It is used chiefly for grubbing up roots.

Brazil. The rivers Madeira, Parana-Paraguay, Araguay, Guapore, and Tapajos form its boundaries, and it is also watered by the Xingu R. The greater part is a plain, much of which is densely wooded, while there are also large swampy areas. Several ranges of low mountains traverse the centre, and are rich in minerals. The province is little known and scantily inhabited. Rubber is the chief export. Capital Cuyabá. Aren 532,680 sq. m. Pop. (estimated) 157,000. It contains a town of the same name, formerly an important mining centre. Pop. 1000.

Matteon, a city of Coles co., Illinois, U.S.A., 50 m. W. of Terre Haute. It has large foundries, machine shops railway works and factories, Pop.

(1910) 11,456.

Maturin, a tn. in the state of Bermudez, Venezuela, 40 m. inland from the Gulf of Parla. Pop. 10,000.

Maturin, Charles Robert (1782-1824) an author, wrote several plays, one of which, a tragedy, Bertram, was pro-duced by Kean at Drury Lane in 1816. He is best remembered as the author of the novels, Montario, 1807; The Milesian Chief, 1812, both of which won praise from Scott, and especially Melmose the Wanderer, 1820, which was his masterpiece.

Maty, Matthew (1715-76), a physician and writer, born near Utrecht; ednoated at Leyden; became a physician in London (1741). In 1750 he founded the Journal Britannique. In 1751 he was made a F.R.S.; in 1753

unc. in

prit Society, and in 1772 principal libra-rlan of the British Museum. He wrote

several memoirs.

Mau: 1. A tn. in the Azamgarlı dist. of the United Provinces, India, 55 m. N.E. of Benares. The chlef Industry is weaving. Pop. 16,000. 2. A tn. in the Jhansi dist., United Provinces, India, 117 m. S.W. of Cawapur, and engaged in the manuf. of kharus cloth. Pop. 21,500.

Maubeuge, a tn. in the dept. of Nord, France, on the Sumbre. It is strongly fortified, has an arsenal, and manufs. glass and hardware. Pop.

nianufs. glass and hardware. Pop. (com.) 21,000.

Mauch Chunk, the cap. of Carlon co., Ponnsylvania, U.S.A., on the Lehigh R. At this spot the river flows through a deep ravine, and the town, which is situated on the mountain slopes, attracts a number of visitors on account of its beauty. It is in the centre of a rich coal region. Pop (1910) 3952.

so that of an adze. It is used chicfly Mauchline, n tn. of Ayrshire, Seotr grubbing up roots. Innd, on R. Ayr, 8 m. S.E. of Kll-marnock. It has noted manufs. of

(1911) 2441.

Maude, Cyril (b. 1862), an English 1884 returned to Eugland, appearing at the Criterion Theatre, London, in 1886. From 1896-1905 ho was eomanager with Frederick Harrison at the Haymarket, London, and in 1907

Maudsley, Henry (b. 1835), a physician, born in Yorkshire; graduated as M.D. from University College, London, in 1857. He was incideal superintendent of Manchester Royal Lunatic Hospitai (1859-62); physiciau at the West London Hospital (1864-74); professor of medical jurisprudonee at University College, Londou (1869-79), and became Goulstonian lecturer at the Royal College of Physicians (1870). Ho has specialised in mental work and was editor of the Journal of Mental Science (1862-78).

and Genius, 1908.

Maui, one of the Hawaiian group of islands, situated about 26 m. N.W. of Hawaii. It consists of two pennisman divided by an isthmus of sand, the eastern one containing the volcano of Haicakaia over 10,000 ft. high. and with a crater 20 m. in eircumference.

The chief towns are Lahaina and Kahului. Pop. 25,000.

Maule: 1. A prov. of Chile, bounded on the W. by the Pacific Ocean. Area 2475 sq. m. Cap. Cauquenes. Pop. on the W. by the Pacific Ocean. Area 2475 sq. m. Cap. Cauquenes. Pop. 111,000. 2. A riv. of Chile which flows into the Pacific Ocean near Constitucion. It is about 140 m. long. Mauléon, a tn. and the cap. of an arron. in Basscs-Pyrénées, France, 25 m. S.W. of Pau. Pop. 3000.

Mauleon of Moulmain a seasont

Maulmain, or Moulmein, a scaport and the cap. of the Amherst dist., Lower Burma, 30 m. N. of Amherst. It has a considerable trade, exporting rice and cotton among other products. It is also engaged in ship-building. Pop. 60,000.

Mauna Ken, a volcano, now extinct, in Hawaii, situated in the centro of the'. 'and, and is the highest point in being 13.805 ft. Pol

ina a, a voicano in Hawaii Is. It is ab 13,660 ft. high, and is still active. La erater of Kilauca is on its E. slope.

fancy wooden articles, and a famous English man of letters. His work conhorse and cattle market. Burns lived sisted mainly of compilations. He at Mossgiel, 1½ m. to the N.W. Pop. acted as assistant and partner to his brother-in-law, William Pinnock, in the compilation of his catcchisms, and Maude, tyril (b. 1862), an English the compilation of his catechisms, and actor, boru in London; educated at himself issued the Literary Gazetle; Charterhouse. Ho first appeared on Biographical Treasury; Scientific the stage in Colorado in 1883, and in and Literary Treasury; Treasury of 1884 returned to England, appearing Knowledge, etc.

Knowledge, etc.
Maundy-Thursday, the Thursday of Holy Weck. The name is derived from mandalum, the first word of the service chanted at the washing the the Haymarket, London, and in 1904 service channed at the washing the took over the managership of the feet of pilgrims on that day, which Playhouse, Charing Cross.

Maudsley, Henry (b. 1835), a physician, born in Yorkshire; graduated as M.D. from University College, and the pilgrims in small baskets, thence London, in 1857. He was medical called 'maunds.' They are usually given by the lord high almoner, but James II. performed the ceremony in person. In 1838 the doie was substituted for a money payment from

Maupassant, Guy de (1850-93), a French novelist and poet, born at the Château of Miromesnil, Scine-Inférieure; educated at Yvetot and Rouen. He entered the Ministry of Marie and Court in the Chartes. Marine, and fought in the Franco-German War. He early came under the influence of Flanbert, who assisted him with encouragement and advice. After about 1886 he gradually broke down in health and reason, and after attempting suicide in 1892 died under painful eireunistances in Paris, As a novelist he was the last of the naturalists, and though marked by considerable limitations in thought and imagination, he was a master in the vivid and accurate reproduction of life which he himself had observed life which he himself had observed with a wonderful intensity. His style is sImple, but most effective. His novels include Boule de suif, 1886; La Moison Tellier, 1881; Mademoiselle Fift, 1883; Une Vie, 1883; Clare de Lanc, 1883; Miss Harriet, 1884; Yectle, 1884; Bel-ami, 1885; Toine, 1886; La Petile roque, 1886; Montoriol, 1887; Let Horla, 1887; Pierre et Jean, 1888; Fort comme la mort, 1889; and Notre cœur, 1890. He also wrote Contes de la bécasse, 1883; Contes et nouvelles; Monsieur Parent, and Contes du jourde la nuit, 1885; and Contes du jourde la nuit, 1885; Le Rosier de Madame Husson, 1888; and Inutile heauté, 1890, all collections of short storics; Des Vers, 1880, a volume of poems, and several books of travel.

Maupertuis, Pierre Louis Moreau de (1698-1759), a French mathematician, born at St. Malo, educated in Paris, and served for some time in the army. In 1723 he was elected to the is ab. 13,660 ft. high, and is still Academy of Sciences, and in 1728 his tive. And erater of Kilauca is on its lope. Sciences, and in 1728 his ardent support of the theories of Newton led to his becoming a fellow Maunder, Samuel (1785-1849), au of the Royal Society, London. In

1736 ho was the head of a party of lovable man, whose only object in Academicians, including Clairaut and life was to do good as he saw it. There Lemonnier, who were sent to Lapland to measure a degree of longitude, and succeeded in exposing the error made in the previous measurement of Dominic and Cassini. In 1740 he went to Berlin and was made president of the Academy of Sciences. He wrote several treatises on geometry, arithmetic, and astronomical measure-

Maur, St., Congregation of, a society of reformed French Benedictines. It was established about 1618 at St. Maur-sur-Loiro, and as the move-ment spread the chief house was removed to St. Germain des Prés, The order, which was famous Paris. for its literary work, was suppressed

at the Revolution.

Maurandya, a genus of climbing perennlals of the order Scrophulariaceæ. M. barclayana bears violet-purple flowers, and is often grown on walls and trellises.

Maurepas, Jean Frédéric Phélipmaurepus, Jean Frederic Phenip-peaux, Comte de (1701-81), a French statesman, born at Versailles. Suc-ceeded his father as Sceretary of State of the King's Household in 1715, and in 1723 became Minister of Marine. In 1749 he offended Madame de Pompadour by an epigram, and was banished from Court. In 1774 he was recalled and made first minister; was a liberal patron of art and science.
Maurice of Saxony, see Charles V.

(1500-58), Emperor of the Ho Roman empire and King of Spain. Holy

Maurice, Frederick Denison (1805-72), an English divine, went to Cambridge University, and there assisted in founding the famous 'Apostles' Club. In 1830 he took holy orders, and six years later became chaplain to Guy's Hospital, which position he held for ten years. In 1840 he became professor of English literature at King's College, London, and in 1845 became Boyle lecturer and Warburton lecturer; but in 1853, at the request of the council, resigned both chairs after the publication of his Theological Essays. He was much inin national education and the condition of the poorer classes, and allied himself with the Christian Charles Socialists. among whom In 1854 ho Kingsley was a power. took an active part in the foundation the Working Men's College, which he was appointed the first principal. In 1860 he became rector of St. Peter's, Vere Street, and held this position until within three years of his death, when he became incumbent of St. Edward's, Cambridge. He had since 1866 been professor of moral philosophy at Cambridge. He was a large-hearted, earnest, slacere, and

is a biography by his son (1884).

Maurice, Prince of Orange and Count of Nassau (1567-1625), son of William the Silent. On his father's assassina-tion (1584) he became stadtholder of Holland and Zealand provinces, and of the seven United Provinces (1587). He showed himself a capable general, capturing Breda, Zutphen, and Nimeguen (1590-91), and expelling the Spaniards, who were compelled to acknowledge the United Provinces as a free republic, and conclude a twelve years' truce (1609). The struggle was renewed (1621), and while negotiating an alliance with England and France M. dlcd. See Van Prinsterer, Maurice et Barnevelot, 1875. See also NASSAU,

House of, and Orange. Maurice, Thomas (1755-1824), an English historian, graduated as H.A. from University College, Oxford, and having taken holy orders took charge of a chapei at Epping in 1785. His interest was aroused in Indiau affairs, with the result that he published Indian Antiquities between 1791-97, and a History of Hindostan (1795-99). For twenty-five years (1799-1824) he was assistant librarian in the British. was assistant librarian in the British

Museum.

Mauricianus Junius, a Roman jurist, flourished, it seems, in the days of Antoninus Pius. He wrote Ad Leges, and his authority is four times cited in the Digest.

Maurier, Goorge L. P. B. du. sce Dv

MAURIER, G. L. P. B. Maurier, Gerald du (b. 1873), an English actor manager, born at Hamp-stead, son of George Du Manrier (q.v.) His first name "le stage was (1894) as In 1895 he toured with Forbes Robertson, playing in The Profligate and Diplomacy, and the same year was engaged by Beerbohm Tree, and appeared as Dodor in Trilby at the Haymarket. In 1896 he accompanied Tree to America, playing in Hamlet, The State of the Mighty, etc., and on his return appeared at Her Majesty's, the Royalty, the Prince of Wales's, the Duke of York's, and Wyndham's (1903), where he played the Hon. Ernest Woolley in The Admirable Crichion. He was the original Captain Hook and Mr. Darling in Peter Pan (1905), and made a great 'hit 'at the Comedy in 1906 as A. J. Raffles in Raffles. He also scored a hig success as Montgomery Brewster la Brew-Among his ster's Millions (1907). later parts may be mentloned John Daughler Nobody's Frampton in (1911), Thomas Pelling in The Per-plexed Husband.

Maurists, a reformed congregation

Mauritania, or Mauretania, the classical name for the most northwesterly portion of Africa, extending southward to the Atlas Mts. and emsouthward to the Atlas Mts. and emhracing sections of the modern Morceo and Algeria. It was so called after the Mauri, or Moors, who inhabited it. The Emperor Claudius divided M. into two provinces, M. Tingttana (from Tingis, the modern Tangiers) and M. Cresarca.

Mauritania, a French protectorate, incorporated in 1909, and comprising the districts of Trarza. Gorgol, Guidithe districts of Trarza. Gorgol, Guidi-

the districts of Trarza, Gorgol, Guidi-maka, Tagant, Brakna, etc., to the N. of the Lower Senegal. The area is \$14,967 sq. m., and the pop. over

the capital, and Grando Port or Mahébourg, the southern port, the latter difficult of access for shipping and much encumbered with coral and much encumbered while tonar reefs. Port Louis has a spacious har-bour. M. produces sugar, salted fish, hides, rum, cocoa-nut oil, fibres, yanilla, and molasses. Area 720 sq. mo. vannia, and molasses. Area 720 sq. m. Pop. 370,393, including over 250,000 Indians. M. was discovered in the year 1505 by the Portuguese commander, Don Pedro Mascarenhas. The Dutch formed a settlement here in 1644, but subsequently abandoned it. A new and more successful attempt to form a permanent establishment was made by the French in 1721. M. remained in French hands 1721. M. remained in French hands until near the close of the year 1810, when it was taken by the British, and has since remained a British possession.

of the Benedictine order, who settled (1494-1575), an Italian mathemat, the beautiful abbey of St. Maurtician, was of Greek origin. He becaute the bound of the becaute a monk and taught mathematics at Messian. In that he used near Paris. They counted Mabilion, letters in arithmetical calculations, he Bouquet, and other learned scholars among their number. may be said to have paved the way for algebra; in trigonometry he in-troduced secants; and in his Treatise troduced secants; and in any on Conics he attempted to deduce the ourves from the fact that they are perspective. His arcs of circles in perspective. Cosmographia appeared in 1543.

Maurus Terentianus (fl. 100 A.D.), a Latin grammarian and poet, wrote a poem on native prosody, entitled De litteris, syllabus, pedibus, metris. It was first printed in 1497.

Maury, Jean Siffrein (1746-1817), a French cardinal and orator, was a cobbler's son. In 1771 he penned a much-admired éloge on Fénelon, and in the following year his Panegyrique N. of the Lower solutions is 344,967 sq. m., and the pop. 230,000.

Nauritia, a genus of tall S. American paims with fan-shaped leaves.
Mauritius (formerly Ite de France), an island of the Indian Ocean belonging to Great Britain, lies in lat. 19° 58° to 20° 33°S., and long. E. from
Greenwich 57° 17′ to 57° 46′. The surface is of varied formation, a great portion being volcanie, while its coast is fringed by extensive coral reefs plereed in several places by the lates of varied formation. A great came cardinal. The accoptance on his part of the archbishopric of Paris is fringed by extensive coral reefs of subsequent disgrace and imprisonment. His Essai sur l'eloquence de la chaire (1777) has become a classic.

Maury, Matthew Fontaine (1806-73), an American naval officer, astro-making the properties of the National formation in the subsequent disgrace and imprisonment. His Essai sur l'eloquence de la chaire (1777) has become a classic. de Saint Louis met with a most cordial

these the most celebrated is the Peter 183, an American naval officer, astronomer, and hydrographer. In 1825 he was appointed midshipman in town of Port Louis, and forming a remarkable cone, sustaining on its apex how was made lieutenant, but being a gigantic piece of rock which has lamed by an aecident ho was apthe appearance of being poised upon pointed to the Hydrographical Office its summit with the nicest precision. While there he The principal towns are Port Louis, wrote his Physical Geography of the capital, and Grando Port or ISeas and his works on the ocean Seas and his works on the ocean currents and great circle sailing. In 1855 he was made commander, and

published several works.

Maurya is the name of a great dynasty which was supreme over Northern India for 137 years. In 321 B.C. Chandragupta Maurya captured the throne of Magadha (or Behar), and established an empire stretching from the Arabian Sea to the Bay of Bengal. The greatest of the Maurya kings was Asoka, the founder's grand-son: the last was Brihadratha. Mausoleum is essentially a large

and imposing sepulchral monument. The word is derived from Mausolus, King of Carla, to whose memory Artemisia, his wife, raised in 353 B.C. a splendid tomb, for centuries the glory of the Asiatic city of Halicarnassus. The romains of the colossal Maurolico (or Marullo), Francesco group, which once crowned the two

eolonnaded ticrs, now rest in the station with Macquarie Island. British Museum. The most ambitious, falled to eaten the relief exped mausolea are those of Augustus and Hadrian (the Castle of San Angelo) at Rome. Those of Frederick William III. and Queen Louisa at Charlottenburg near Berlin; of Napoleon III. at Farnborough; and of the Prince Consort at Frogmore are also noteworthy.

Mauve was first patented as a dye by Mr. Perkin ln 1856. It was the first colour obtained from aniline, being produced by treating it with chromic acid or the hypochlorites.

Mauve, Anton (1838-88), a Dutch landscape painter, was a friend of Israels and Maris. His rurai pictures breathe sombre peace, and are attractive for the very delicacy of their

tonal scheme. Maverick, an American expression for stray cattle. The word recalls a Texan, Samuel Maverick, who took advantage of the turnoil caused by the Civil War and freely appropriated

Mavrogordato, Mavrocordato, or Mavrocordatos, the name of a distinguished family of Phanariot Greeks. Alexander Mavrocordato (c. 1636-1709) was a doctor of philosophy and medicine, who was very influential at

any cows that he eaught straying.

the court of Sultan Mustapha II. It was no who arranged the Peace of Karlowitz (1699).

Nicholas Mavrocordato (1670-1730)

was Alexander's son. He was prince (hospodar) of Wallachia, and ruled the Danubian principalities for the suitan, exciting the bitter indignation of the Rumanians by his Heilenising

Alexander PrinceMarrocordato (1791-1865) was a descendant of Nicholas. He defended Missolonghi during the Greek War of Independ-once (1822-23). In 1832 he was chosen vice-president of the Greek national assembly at Argos, and the following year he became first minister to King Otto. He was Greek ambassador at Berlin, London, and Constantinople, and on two later occasions (1844 and 1855) the vicissitudes of the political situation brought him to the head of affalıs.

Mawson, Dr. Douglas (b. 1882), an explorer and geologist, horn in Bradford, Yorkshire, England, who before leaving for exploring in the Antartic (1912) was lecturer in geology in the university at Adelalde, Australia. He was appointed to the scientific staff on the expedition to the New Heb-rides; to R. F. Scott's and Sir E. Shakleton's expeditions to the Antarctle. He is now absent (1913) on Dr. Mawson's Antarctic expedition in Adelle Land, where he has been occasionally in touch by his wireless

failed to eateh the relief expedition. and must wait another year in the Antaretic.

Maxcanu, a com. in the state of Yucatan, Mexico, 36 m. S.W. of Mérida. The grotto of M. is looked npon as sacred. Pop. 10.000.

Maxentius, Marcus Aurelius Valerius (306-312 A.D.), Roman emperer, put his rivai, Severus, to death, and banished his father, Maximianus, to Gaul. Eventually, after a despeable display of eruelty, vice, and incapacity, he was drowned in the Tiber whilst fleeing from Coastantine, who had defeated him at Saxa Rubra.

Maxillaria, a genus of terrestrial orchids with thick ficshy flowers occur-

ring mainly in Central America. Maxim, Sir Hiram Stevens (b. 1840) an American eivil, mechanical, and electrical engineer, born in Maine, U.S.A. He first made experiments U.S.A. and improved steam engines, and invented an automatic gas engine. He then studied electricity, invented an incandescent electric jamp, and tho method of using earbens in electric lighting. His great work, however, is the automatic system of fire-arms, and he has recently turned his attention to aerial flight. Ho was formerly connected with the firm of Vickers, Sons, and Maxim.

Maxima and Minima. Many mathematical problems are comprised under this nead. For example, a line of given length may be made to enclose various shaped and sized figures; what is the greatest space it can be made to enclose? A number is the sum of two other numbers: of all the pairs that can be selected, which pair will show Many such the greatest product? problems were stated and selved by the ancient Greeks. Euclid has many propositions of this nature solved by geometrical methods. Such problems aro of great practical value in the useful arts; c.g. given a certain amount of metal what dimensions for a cylindrical cistern will provide the greatest capacity? Or again, given a log of wood, what dimensions on cut-ting to a rectangular beam will give the greatest strength? In each problem a maximum or minimum has to he found. The study of curves, the conditions of their formation by a moving point has led to greater complications; there are three phases to be determined: rise, fall, and turning. A curve attains a maximum at the moment It ceases rising and commences to fall; a minimum at the moment it ceases to fall and commenees to risc. Or, in algebraic laaguage, when any value y of a function is greater than the immediately neighbouring values, both before and

after, it is called a maximum value of and entrusted with the command of the function; when any value y of a function is less than the immediately neighbouring values, both before and atter, it is called a minimum value of the function. There may be many maxima and many minima, and a maximum value according to the definition above is not necessarily the greatest value the function may have. Considering an irregular wavy curve cach maximum or minimum is the highest or lowest point occurring in any phase, and a minimum may have a higher value than a maximum. Bernoulii in 1696 propounded and solved problems by methods which became known as 'isoperimetrico.' This was extended by Enler, and icd to the invention by Lagrango of the calculus of variations. Practically speaking, the subject is now investi-gated by the differential calculus. Curves are considered from the point of view of gradient; the gradient is represented by the symbol $\frac{dy}{dx}$. law of a curve is shortly expressed as f(x), its value at any point is y. As the gradient is itself a function of x, $\frac{dy}{dx}$ is a derived function, or, shortly, the derivative. So long as a curve is increasing towards a maximum its derivation is positive, with decrease negative. At the turning points the

gradient is 0, i.e. $\frac{dy}{dx} = 0$. Maxima

occur, therefore, when $\frac{dy}{dc}=0$ when changing from positive to negative;

minima, when $\frac{dy}{dx}$ =0 in changing from

negative to positive. See most elementary treatises on algebra, e.g. Chrystal; any book on differential calculus; an excellent book is Perry's Calculus for Engineers (London, Edward Arnold).

Maximianus I., a Roman emperor, 286-305 A.D., originally a Pannonian soldier, was made by Diocletian his colleague in the empire, but was comcolleague in the empire, but was compelled to abdicate along with the latter. When his son, Maxentius, assumed the imperial title in the following year (306), he resided some time at Rome, but being expelled from the city by Maxentius, he took refuge in Gaul with Constantine, who had married his doubter. Fauste had married his daughter, Fausta. Here he was compelled by Constantine to put an end to his own life, in the year 310.

Maximianus II. (Galerius Valerius Maximianus) (305-311 A.D.), Roman emperor, tho son of a shepherd. He served in the wars of Aurelian and Probus, and in 292 was made Cæsar,

Illyria and Thrace. Upon the abdication of Dioeletian and Maximianus I. in 305, he became Augustus, but in 307 suffered defeat at the hands of the usurper Maxentius and lost Italy and Africa. The rest of his life was spent in works of public utility. His pitiless persecution of the Christians was a great blot on his reign.

Maximilian I. (1459-1519), one of the most distinguished of the German emperors, the son and successor of Frederick III., was born at Neustadt, near Vienna. In his nineteenth year he married Maria, the heiress of Charles the Bold, Duke of Burgundy, and treasured in the son invested in the second Charles the Bold, Duke of Burgundy, and was soon involved in war with Louis XI. of France, who attempted to seize some of her possessions. M., although successful in the field, was compelled, by the intrigues of Louis in the Netherlands, to betroth his daughter, Margaret, then four years old, to the Dauphin, afterwards Charles VIII., and to give Artois, Flanders, and the duchy of Burgundy as her dowry. In 1486 he was elected as her dowry. In 1486 he was elected king of the Romans. Insurrections in the Netherlands, encouraged and supported by France, again involved him in war with Louis XI. He after-wards repelled the Hungarians and the Turks. He again took up arms against France because Charles VIII. sent hack his daughter and married Anne of Bretagne, in order to acquire that great province. A peaco was, inowever, soon concluded at Senlis in 1493. M. receiving hack the provinces which he had given with his daughter. On the death of his father in 1493, he became emperor, and he subsequently married Bianea Sforza, daughter of the Duke of Milan. He applied himself with wisdom and vigour to the internal administration of the empire, took measures for the preservation of peace in Germany, and encouraged the cultivation of the arts and sciences. But he was soon again in-volved in wars against the Swiss, the Venetians, and the French. He sought to put a stop to French conquests in to put a stop to French conquests in Italy, and was at first successful, but ultimately he had to give up Milan to France and Verona to the Venctians, Nor was M. more successful against the Swiss, who in 1499 completely separated themselves from the Ger-man empire. The marriage of his son Phillip with the Infanta Juana, and of Philip with the Infanta Juana, and of his daughter Margaret with the Infant Juan of Spain, led to the subsequent mion of Spain with Austria, whilst the marriage of two of his grand-children with the son and daughter of Ladislaus, King of Hungary and Bohemia, brought both these king-doms to the Austrian monarchy. He wrote works on war and hunting.

Maximilian II., Joseph (1811-64), and Egypt in 305. In 308 hc assumed King of Bavaria, son of Ludvig I., the title of Angustus, and on the was born and died at Munich. He death of his uncle, Galorius, in 311. married in 1842 the Princess Maria Hedwig. Until 1848 he took no part In political affairs, but devoted himself to agricultural and other im-provements and to the pursuits of literature and science. In that year of the revolutionary excitement, he was suddenly called to the throne on his father's abdication, and adopted a policy accordant with the liberal

tendoncies of the time. Maximilian, Ferdinand Joseph, Archduke (1832-67), son of Archduke duke (1832-01), son of Austria, and son-francis Charles of Austria, and son-in-law of Leopold I., King of the Belgians, whose daughter, Charlotte, he married in 1857. Made governor of Lomhardo-Venetia in 1857 by his or Lomnardo-Venetia in 1857 by his brother, Emperor Francis Joseph, In pursuance of his policy to conciliate the Italian republics, but M.'s chival-rous nature availed nothing against the implacable hatred of Italy for Austria. Forfeited all his Austrian rights on being procialmed Emperor of Mexico by the French transactor rights on being proclaimed Emperor of Mexico by the French troops after the capture of Puebla in 1863. His position as the nomince, on the one hand, of France in that nation's endeavours to enhance its prestige abroad, and the obstacle, on the other hand, to the American determination to enforce the Mor trine (q.v.) rendered him between the Liberal and Mc parties of Mexico, while his diffi-

parties of Mexico, while his dim-oulties were increased by the machina-tions of Bazaime, the French com-mander, who was endeavouring to supersede him. On his abandonment by France in 1866, he was shot at Queretaro, probably by the orders of

Maximinus, Caius Julius Verus, was originally a Thracian shepherd. Ho was of gigantic size and great bodily strength. Alexander Severus gave him the command of a new legion nim the command of a new regrouralsed in Pannonia, at the licad of which he followed Alexander in his campaign against the Germans on the banks of the Rhine, where he induced some of his companions to murder Alexander in his tent as well and the market Maranese (2015). as his mother, Mammaa (235 A.D.). He was proclaimed emperor, but his eruelty and rapacity aroused enemics against him in various parts of the empire. Ho was killed by his own soldiers in 238 A.D. when he was besicging Aquilcia.

hore the name of Daza, and in early life followed the occupation of a shep-hord. Having quitted this for the part and by Dounais (1802)

the title of Angustus, and on the death of his uncle, Galorius, in 311, succeeded to the command of the provinces of Asia, and entered into a secret alliance with Maxentius, Having invaded Thraco in 313 in the absence of Lleinus, he suffered a crushing defeat near Heracica, and was forced to flec. His death took piace at Tarsus.

Maximus, Magnus Clemens (383-88 A.D.), Roman emperor, a native of Spain. He accompanied Theedosius on several of his expeditions, and remained for some years as a general in Britain. Here he was elected emperor by the troops in 383, and immediately crossed to Gaul to attack Gratian. The latter was defeated and slain, and Gaul, Spain, aad Britain did homage to M. In 387 he crossed the Alps, put Valentinian to flight, and established himself in Milan, hut was defeated by Theodosius at Sixia, on the Sace, and again at Poctovio on the Danube, being with the control of the panube, the panube when the control of the panube, the panube when the panube was the panube when the panube was the panub being subsequently captured and put

443. He was friendly III. until the Em-peror outraged his (M.'s) wife, after which M. murdered him in 155. M. was elected emperor immediately, and married the widowed Empress Eudoxia, but was killed by

Vandals the same year.

Maximus, Rutilius, a Roman jurist who wrote a treatise entitled Ad Legen Falcidiam, which was enacted

40 B.C. Maximus Tyrius, a rhetorician and Platonio philosopher, lived in the latter half of the 2nd century, during the reigns of the Antonines and of Commodus. There are extant forty-one dissertations of M. T. on various points connected with the Platonic philosophy, which are written in an casy and pleasing style, and more commondable for the expression than the matter. The following exampies will give some idea of the subject of these dissertations: Oa Plato's Opinion respecting the Delty,
'Whether we ought to return in
juries done to us,' Whether Prayers
should be addressed to the Delty,' etc.

of a soldier, ho was raised to the rank French Orientalist, born at Amiens of Cæsar, and made governor of Syria and later director of the seminary

there. His principal work is his sity (1910), and is at present president Grammaires chaldaique et hebraique, of the Society of Antiquaries of Scotconsidered as one of the finest works laud. He is well known as a writer, of its kind. In it he opposes the and among his works are: Sludies in

Dessau and Leipzig Berlin and Paris.

was made a member of the Privy Council in 1896. His works include : Comparative Philology, 1856; A History of Ancient Sanskrit Lilerature, 1859; Lectures on the Science of Language, 1861-64; Handbooks for the Study of Sanskrit, 1865-70; Chips from a German Workshop, 1868-75, etc. He edited the Sacred Books of the Easl, and published translations of various Orients, were seen as of various Oriental works. See his Auld Lang Syne, 1898. Max O'Rell, alias Paul Blouët (1848-

1903), a writer, horn in Brittany. He was educated in Parls, and liaving served in the Franco-German War, came to England in 1873 as a newspaper correspondent. Ho was French master in St. Paul's School (1876-84). and subsequently lectured in the United States, Canada, Australia, New Zealand, and S. Africa. All his books have been translated into books have been translated moderalish by his wife, and amongst them are: John Bull and his Island, them are: John Bull and his Island, Parameter, 1885; 1883; John Bull's Daughter, 1885; The Dear Neighbours, 1886; Drat the Boys, 1881; Jonathan and his Conti-nenl, 1890; A Frenchman in America, 1891; John Bull & Co., 1894. Maxwell, Mrs. John, see Braddon,

MARY ELIZABETH.

Maxwell, Sir John, see HERRIES. Maxwell, Rt. Hon Sir Herbert Eustace, seventh Baronet (b. 1845), a writer and politician, born in Edinburgh. He was educated at Eton and Christ Church, Oxford, and was M.P. for Wigtownshire (1880-1906). He He Scottish history in Glasgow Univer- acceptance.

of its kind. In it he opposes the and among his works are: Studies in introduction of root-vowels. See the Topography of Galloway, 1887; The Querard, La France Lilleraire.

Max-Müller, Fredrich (1823-1900), Letter of the Law (a novel), 1889; The philologist and Orientalist, horn Meridiana: Noontide Essays, 1892; at Dessau, where his father, Wilhelm Lafe of the Right Hon. IV. H. Smith, Müller, was librarian of the ducal 1893; Scotlish Land Names, 1894; library. After heli Dessau and Leipzig (a Struggle for Scotlish Land Names), 1895; the Struggle for Scotlish Land Names of the 1897; Memories of the

Berlin and Paris,
Company commissioned him to edit
the Rig-Veda at their expense, and
this work brought him to England in
1846 to consult the MSS. in the East
India House and tho Bodleian
Library. He settled at Oxford in
1850 upon his appointment as
deputy Taylorian professor of modern
languages. Four years later ho
succeeded to the professorship. He
succeeded to the professorship. He
succeeded to the professorship. He
Library in 1856, and from 1865-67
was curator of Oriental works. In
1866 he was made professor of company the received
many honours and distinctions, and
The Making of Scolland, 1911; Early
Chronicles relating to Scolland, 1912. 1897; Memories of the Chronicles relating to Scotland, 1912,

Maxwell, James Clerk- (1831-79), a Scottlsh physicist, born at Edinburgh; educated at the Edinburgh Academy and the universities of Edinburgh and Cambridge. At the carry ago of fifteen he sent to the Royal Society of Edinburgh a paper on the 'Description of Oval Curves,' and during the carry wars followed it up by 'On next three years followed it up by 'On the Theory of Rolling Curves,' and 'On the Equilibrium of Elastic Solids.' In 1856 he became professor of natural philosophy at Marischal College, Aberdeen, and in 1860 held the same post in King's College, London Marischal College, Aberdeen, the Bowl Societies. don. Member of the Royal Societies of London and Edinburgh. On the endowment by the Duke of Devon-shire of Cambridge University with a model lahoratory of experimental physics, M. was elected unanimously as the first professor of experimental physics in that university. chicfly notable for his important researches in electricity and magnetism, his most remarkable papers on this topic being 'Physical Lines of Force' (1862), 'On a Dynamical Theory of the Electro-Magnetic Field' (1864), and 'On a Method of making a direct Comparison of Electrostatic Electro-Magnetio Force ' (1866). also investigated the molecular constitution of matter, the kinetic theory of gases, and geometrical optics, and wroto treatises on Heat, The Heat, Matter Dynamical Theory of Gases, Matter and Motion, and Magnetism and and Motion, and Magnetism and Electricity. His theory re electrical was Rhind lecturer in archeology, Electricity. His theory re electrical Edinburgh (1893-1911), lecturer on and magnetic forces is gaining wide

Maxwell, Robert, Lord (d. 1546), but none of these met with success was a member of a Scottish family His next venture was translation and which settled near Kelso about 1100. He was a member of the royal council under James V., a warden of the west marches, and a lord provost of Edinburgh. He was also an extraordinary lord of session in 1533, and one of the regents in 1536. He was taken prisoner by the English at the

rout of Solway Moss in 1542. Maxwell, Sir William Stirling-(1818-78), an historian, born near Glasgow. He was an ardent bibliographer and collector of works of art, and especially a pioneer of Spanish art. writings include: Annals of the Artists of Spain, 1848 (Velazquez issued separately, 1855); The Cloister Life of Charles V., 1852 (enlarged 1891). 1891); and monographs on the bibliography of proverbs. He also contri-buted to Fraser's Magazine and the Examiner

Maxwelltown, a tn. in Kirkeud-brightshire, Scotland, on the Nith, opposite Dumfries, with which it is connected by bridges. It has dye-works, sawmills, and nurseries, and An observatory, is situated on manufs. tweed. with a museum, is situated Corbelly Hill, quite near to M.

Pop. (1911) 6200. May, the fifth month of the year and the last of spring. It was the third month in the Roman calendar, and was called M. probably after Maia, the mother of Mercury, to whom the Romans used to sacrifice on the first day of this month. It was regarded by the Romans as asl an unlucky month, especially for marriages, and the superstition still survives in some parts.

May, Isle of, in the Firth of Forth. Fifeshire, Scotland, 51 m. S.E. of On the highest point of the

island is a lighthouse. May, Philip William (1801 1000) commonly known as humorous artist; after an

ous carcer as a lad, camo f as an artist with his illustrations to duces or constitutes the Isvara, the The Parson and the Painter (1891). Ho published Annuals from 1892, and contributed sketches of low life

came a member of the staff of Punch.
He was one of the greatest black and white artists, and a lineal descendant of Leceli and Keene.
May, Thomas (1595-1650), an English writer, born in Sussex. He admitted to Gray's Inn in 1615, being prevented by defective ut ance from practising the law, gave himself up to literature. He first produced a comedy entitled The Heir which is much from the two most important members of the staff of the much from the two most important members of the staff of the much from the two most important members of the staff which is much praised by Thomas Carew, and followed this by another of the Guatemalan plateaux. They comedy, and three classical tragedies, inhabited Mexico, Yucataa, Guate-

he published in 1628 a version of Virgil's Georgics, and the following year Martial's Epigrams. Resides these he translated Lucan's Pharsalia. which met with unstinted praise from Ben Jonson, and in 1633 he was commissioned by the king to write two narrative poems, one on Henry II., the other on Edward III. His reputation as a prose writer rests upon his History of the Long Parliament, which is described by Chatham as being 'a much honester and more instructive book than Clarendon's.

May, Sir Thomas Erskine, Baroa Farnborough (1815-86), a constitutional jurist, born in London. He was assistant librarian of the House of Commons in 1831, and a barrister at the Middle Temple in 1838. In 1814 he published A Practical Treatise on the Law, Privileges, Proceedings, and Usage of Parliament (10th ed. much enlarged, 1893), a learned work which has been translated into German, French, Italian, Spaoish, Japanese, and Hungarian. He was examiner for private bills and taxing-master for both Houses of Parliament, 1847-56, and clerk of the House of Commons, 1871-86. He was president of the Statute Law Revision Committee, 1866-84, a member of the privy council, 1885, and created Baron Farnborough in 1886. Besides the work mentioned above he published The Constitutional History of England since the Accession of George III., a work worthy to rank with that of Hallam; and Democracy in Europe: A History.

Maya, a riv., in the prov. of Yakutsk, E. Siberia, Russia, is a tributary of the Aldan, joining it on the r. b. after a course of 600 m.

Maya, illusion (otherwise called , power),

fictitions with the sha) pro-

Lord, or eosmic soul, the first emanation of the Atman, and himself the (fietitious) cause of all that seems to

the Yucatan plains and the Quiches

mala, and Honduras, and represented and townspeople. And all who wished the most cultured infiabltants of Central America at the time of the Spanish conquest. Among the various nations may be mentioned the Mayas, Chols, Zeudals, Mames, Lacandons, Cachiqueis, Quichés, Pocomans, Huaxtees, Itzas, Poconchis, Zotzils.

Mayas, a race of American Indians, the aborigines of Yucatan. They were the most advanced of the American Indian races, and had a written lan-guage, and left numerous examples of MSS, and picture writing. In re-ligion they had much in common with the Aztecs, and worshipped the sun and Idois carved from stone; they also at times had human sacrifices.

''''' y sub
'''''' and in

paid more attention to war. They lived well, dressed in cotton woven themselves, and were expert leather-workers. They also made many ornaments of gold and green-stone, but they were especially skulful in architecture and in carving in stone. They erected buildings of vast size which they decorated in a wonderful manner, and though these cannot compare with the buildings of Egypt and Grecce, their massive character and lavish wealth of carvings attest a civilisation far superior to that of many civilised peoples in the Old World. One of the most famous Mayan works of art is in the temple of Paicique, which contains a remarkable tablet on which is represented a sacrificiai scene.

Mayayaram, a tn. in the Tanjore dist., Madras, British India, 174 m. S.W. of Madras. It manufs. eetton and silk goods. Pop. 24,500.

Maybole, a tn. in the co of Ayrshire, Scotland, 8 m. S. of Ayr; possesses an old castle. The chief industry is the manuf of shors. Pop. (1911) the manut, of shoes. Pop. (1911) 4889.

May Day, the 1st of May, was formerly celebrated throughout Great Britain, and to a lesser extent in France and Germany, with festivities, which now only survive in a few rural district. districts. They are the direct descendants of the ancient Roman Floralia, and of the Druidic feasts in honour of the god Bel. In Tudor England the eustoni seems to have been for people to go into the woods in the night, gather branches of trees and flowers, and return with them at sunrise to decorate their houses. Then there was the crowning of the May Qucen, who held sway for one day over her court, consisting of morris dancers, Robin Hood, Maid Marian, Friar Tuck,

danced round a maypole decorated with flowers and ribbons. The maypole was generally made of birch, and was set up on April 30, except in London where permanent maypoles stood in the streets. The May revels were much eensured by the Puritans, and in 1644 maypoles were forbidden to be erected by the Roundhead parliament. They were, however, sanctioned at the Restoration, and in 1661, a cedar pole, 134 ft. high, was creeted in the Strand. It was taken down about 1717 and used by Sir Isaac Newton as a support for the great telescope which had been presented to the Royal Society by a French astronomer.

Mayehashi, a tn. of Honshin, Japan, 70 m. N.N.W. of Tokio. It trades ehiefly in silk. Pop. 45,000. Mayen, a tn. in the Rhine Province, Prussia, 15 m. W. of Coblenz. The

ehicf manufs. are cloth and tobacco. It has also breweries and tanneries. Pop. 14,423.

Mayence, see Mainz.

Mayenne: 1. A dept. of W. France, mayenne: 1. A cept. of W. France, formed from parts of the old prov. of Maine and Anjou. M., which is included almost entirely within the hasin of the Loire, has a mild olimate but only a partially productive soil, heing occupied in many districts by extensive sandy heaths. The chief branches of industry are the breeding branches of industry are the breeding of cattle and sheep and the rearing of bees, while the iron mines and marble quarries of the district yield employ-ment to the poorer classes. The linen, hemp, and paper manufs, are of some importance. Cap., Laval. Area 1986 sq. m. Pop. 297,732. 2. A tn. of the abovo dept. on the Loire, on the r. b. of which rises, on a steep and rocky height, the ancient fortress of the dukes of Mayenne. There are linen and calico manufs. Pop. 10,000. 3. A riv. in the N. W. of France, which rises in the dept. of Orne, and de-bouches at Pont de Cé into the Loire.

Douches at Font de Ce into the Loire. Length 130 m.

Mayer, Julius Robert von (1814-78), a physicist, born at Heilbronn. He studied at Tubingen, Munich, aud Paris, and subsequently settled as a physician in his nativo town. In 1842 he published Bermerkungen über die Kwitte der unbeichten Natur, as a pro-Kräfte der unbelebten Natur, as a pro-Ilminary to Die organische Bewegung in ihrem Tusammenhange mit dem Stoffweehsel, which appeared three years later. Both of these deal with the conservation and transformation

of energy.
Mayer, Simone (c. 1760-1845), an opera composer, born at Mendorf in Hood, Maid Marian, Friar Tuck, Bavaria. He seemed songs Little John, and other members of the having previously produced songs same band, as well as of the villagers and oratorios, published his first Bayaria. He studied in Italy, and opera, Saffo, ossia i riti d'Apollo Mayhew, Horace (1816-72), the Leucadio in 1794. This was so well author of a number of farces and tales received that he devoted himself to which owe their survival mainly to this mode of composition, and produced no less than 77 operas. Among his best aro: Lodoiska, 1800; Ginerra di Scozia, 1801; Medea, 1813; and Rosa bianca e Rosa rossa, 1814. Ho is said to have been the first to intro-duce the crescendo of the orehestra, to which Rossini owes so much of his fame.

Mayer, Tobias (1723-62), was horn at Marbach. He was left an orphan and unprovided for at a very early He taught mathematics for a living, and studied gunnery in his spare time. Ho published a memoir in 1750 On the Libration of the Moon. In 1751 he became director of the observatory at Göttingen, and afterwards professor of economy in that university. His Zodiacal Catalogue

Mayfair, a fashionable quarter of the W. of London, which is situated N. of Piceadilly and the Green Park. Mayfield, a tn. of Kentucky, U.S.A.

eo. seat of Graves eo., 24 m. S. of Paducah. Pop. (1910) 5916.

Mayflower, see PILGRIM FATHERS. Mayfly, see EPHEMERA.

Mayley, Augustus Septinius (M. Mayhew, Augustus Septinius (M. 75), an author, brother of Henry M. Horaco M., born in London. He works of produced many popular works of fiction with his brother Henry, the

but ran away from school and made' a voyago to Calcutta. On his return receives 500 students all destined for he was articled to his father, a the priesthood and all resident within London solicitor, but soon abandoned the building. The full collegiate law for literature. His first production was the weekly periodical, Figaro in London, which he published with Gilbert à Beckett in 1831, and followed this by The Thief in 1832. He also collaborated with his brother The const-line of M. is about 250 in Augustus, and produced with him, among other works, The Good Genius, The Plague of Life, and Acting Bay, Westport Bay, Newport Bay, Charades. He also wrote humorous and books on travel:

Cruikshanks' illustrations. contributed to Lloyd's Weekly News and Cruikshanks' Table Book, and was for a time sub-editor of Punch.

Maynard, a tn. in Middlesex co., Massachusetts, 20 m. N.W. of Boston, on Assabet R. It has woollen manufs. and powder mills. Pop. (1910) 6390.

Maynard, Sir John (1602-90), an English judge, born at Tavistock. He was called to the bar ln 1626, and in 1640 was appointed recorder of Plymouth. Ho represented Totnes in the Short Parliament of 1640 and the Long Parliament, and in 1654 was called to the degree of serjeant-atlaw, becoming king's scrieant at the He was member for Restoration. Plymouth in the convention (1689), and was sworn lord commissioner of

was his next work. In 1765 he published his Lunar Tables. These tables were printed by the Board of Longitude in the year 1767, and likewise in the year 1770. To M. is also due the discovery of the principle of the repeating circle, which was afterwards so fully doveloped hy Borda, and employed by him in the measurement of the arc of the meridian.

Mayfair, a fashlonable quarter of Mayro, Jasper (1604-72), an archidence of Chiehester and dramatist, was educated at Westminster and Christ Church, Oxford, and took his of Clvil War often preached before the made rector of Pyrton, only to be deprived of this post in 1636. Ho was, Mayfair, a fashlonable quarter of at the Restoration, and made a canon of the cross of the principle of Christ Church, erchdeacon οſ Chickester, and chaplain-in-ordinary to the king. He wrote The City Malch, a domestic comedy, 1639; The Amorous War, a tragi-comedy, published 1648; and a translation of Luciaa's Dialogues, begun in 1638.

Maynooth, a tn. of co. Kildare, Ireland, 15 m. N.W. of Dublin. Its chief luterest is contred in its Roman produced many popular works of chief futerest is contred in its Roman fiction with his brother Henry, the Catholic collego, which was establest of which is The Greatest Plague of lished during the ministry of Mr. Life, or the Adventures of a Lady in Search of a Good Servant. Of his the Irish parliamont. In the year separate writings may be mentioned: 1846 Sir Robert Peel carried a bill for Pared with Gold, or the Romance and Reality of the London Streets, 1851; man, no longer dependent on a voto and Faces for Fortunes (3 vols.), 1865.

Mayhew, Henry (1812 – 87), an which was added a grant of £30,000 a guttor, was educated at Westminster. In hullding purposes. The college is author, was educated at Westminster, for building purposes. The college is a very striking Gothic structure, and

being part of the great plain of Ire-, land, hordered by two ranges of meantains, separated from each optears to have rises to eminence, other at the sea by Clew Bay. Of the at the sea by Clew Bay. Of this particular functions, other at the sea by Clew Bay. Of the Mayor of the Palace, or first Muilrea (2680 ft.), Croagh Patrick officer of the royal household of the (2370 ft.), and Nephin (2530 ft.). The Merovinglan kings. This officer heself of the control plain is fettle and serves reasoned. soil of the central plain is fertile and for the most part suitable either for tillago or for pasture, although the prevalence of rain and the frequency of ungenial winds ronder the pursuit of tillage, especially of wheat and potatoes, precarious and unremunerative. The rearing of cattlo forms in most parts of the county the more ordinary pursuit of the agricultural population. Ironstone abounds in some districts, but owing to want of fuel no attempt is made to work it. An execulent marble is found in the north-western district, and there are several places in which slates are successfully quarried. The chief towns are Castlebar, Westport, Ballina, and Ballinrobe, and the principal rivers are the Moy and the Owenmore, Loughs Cullen, Conn. Westport, Castlehar, Corramore, and Carragh lie within the county. Almost the only occupations of the population are agriculture and fishing. A valuable A valuable record, held before the mayor and salmon fishery exists in the R. and the small take of Lough Mc the habitation of the well-k

are at Cong the remains of a splendid abbey, which dates from the 12th century. The celebrated 'Cross of Cong, now in the Museum of the Cong, now in the nutseam of the archi-episcopal erosier of Tuam, once pre-served in the abbey of that name.

Mayon, a volcano in the prov. of Albay, Luzon Is., Philippine Isles. Its cone, which is perfect, rises to a height of \$274 ft., and the mountain

is frequently in eruption.

Mayor. A M. was originally an overseer, or steward, or kind of bailiff, if the derivation from Norman maeur, mair, be correct, and the word really eognate with Armorie mear, i.e. one stary to observe the traditional forms that looks after, tends, or guards, e.g. maer p biswal, a land steward. Others, howover, derive the word from Lat. count for money in the star of a count sur contessit solvere (claim for money in the star of the count for money in the star of eognate with Armorie mear, i.e. one

tively late development of the borongh

came successively chief officer of state, minister of the palace, and king, for the last of them, Pepin, after de-posing Childerio IV., founded the Carlovingian dynasty (A.D. 750). The M. at the present day as the bead of a municipal corporation is in a prominent a: term of

under and MUNICIPALITIES.) In times of riot or elvil disorders he has power, and indeed is compelled, to call in the aid of troops—a power the exercise of which in certain eirenmstances may place him in a very unenviable position (see Regina v. Pinney, 1866), for technically at least ho may be liable to criminal proceedings for murder if he acts without justification and to an information for neglect if ho omits to act. In other words ho must

' hit the precise line of his duty.'
Mayor's Court, an ancient court of

London at the ritics traco its tomary juris-of London in

Mayow

the hahtauton 'gillaroo' trout. There is son dustry in linen and woollen g but, generally speaking, M. is of the most impoverished count Ireland. Area 2156 sq. m. Pop. (1911) separate tribunal in the reign of 191,169. The antiquities of M. are 191,169. The antiquities of M. are the property of the mayor and all the chiefly ecclesiastical. Four round the aldermen are the judges, but the chiefly ecclesiastical. Four round in this absence, the companion in his absence, the companion in his turn, if unjudgo, or, in his absence, the com-mon serjeant, who in his turn, if unavoidably absent, may be represented by a barrister of seven years' standing. There is much antiquarianism about the M. C., both as to the names of its officials-e.g. the duties of a sheriff omtains—y the duces of a sterm are carried out by the serjeant-at-mace and the deputy serjeant-at-mace—and as to the formalities of pleading. Elsewhere the strict letter of formal pleadings has been superseded by the necessity of doing nothing more than to state the issues in elear and unequivocal terms; but in the M. C. it is still (apparently) neces-sary to observe the traditional forms

Mayow, John (c. 1643-79), an Eng-

velops a theory of combustion, and important modern discoveries in important pneumatie chemistry. Sec Hoefer, Hist. de la Chimie. ii.; Blumonbach, Physiologica, 1786; Institutiones

Nocher, Gelchrien-lexicon, iii., 1751. Maysville, the cap. of Mason eo., Kentucky, U.S.A., on the Ohio R., 60 m. S.E. of Cinclinati. The chief manufs. are cotton, flour, tobacco, and shoes. Pop. (1910) 6141.

Mayweed, a name given both to the Stluking Camomile (Anthemis cotula) and to the secutiess Corn Feverfew (Matricaria inodora), the ray florets of which are ultimately reflexed.

Maywood, a tn. In Cook co., Ill-nois, U.S.A., 10 m. N. of Chleago, on the Des Plaiues R. It has important steel works, Pop. (1910) 8033.

Mazagan, a scaport th. of Morocco, 115 m. N. of Morocco. This town is the port of Morocco, and its road-stead affords facilities for a safe anchorage. The chief exports are grain, almonds, hides, and wool. Pop. 25,000.

Mazamet, a tn. in the dept. of Tarn, France, 50 m. S.E. of Toulouse. Its ehief manufs. are cloth, leather, and flannel. Pop. 14,000.

Mazanderan, a prov. in the N. of Persia, bounded by the Elburz Mts. and the Caspian Sea. The ellmate is unlicalthy, and the ground somewhat swampy, but fertile. The chief productions are rice, cotton, sugar, agri-eultural products, caviare, and slik. The chief minerals are Iron and petroleum. Area 10,460 sq. m. Cap. Sari. Pop. 200,000.

Mazapil, a tn. of Zacatecas state, Mexico, 65 m. S.S.W. of Saltillo. Pop. 6000.

Mazarin. Mazzarino) statesman, s. noble Sicilian, was born at Piscina in | the Abbruzzi. Having received his elementary education at Rome, he passed into Spain with the Abbé (afterwards Cardinal) Girolamo Calcinum of the age of seventeen, where he attended courses of law in the universities of Alcala and Salamanca. But he soon abandoned jurisprudence in order to embrace the military profession, and in 1625 was sent into the Valteline, where the pontiff then had an army. From this time he began to display his talents

Mazarin lish chemist and physiologist, practised as a physician in Bath. He published **Tractatus quinque medico-physici, 1674; containing 'De salintro et spiritu nitro-erco,' which develops a theory of combustion, and the study of jurisprudence and took his doctor's degree. But the district succession to the duplice of the study of the duplice of the study of t disputed succession to the duchies of Mantua and Montforrat having kindled up a new war, he quitted law for diplomacy, in which line nature had peculiarly qualified him to excel. The competitors were the Duc de Novers, whose cause was espoused by the court of France, at which he re-sided and the Duca de Guastalla, who was supported by the omperor, the King of Spain and the Duko of Savoy. The popo, desirous to prevent a war of which Italy was about to become the theatre, sent Cardinal Sacchetti to Turin to act in favour of the Duc de Novers, and M. accompanied him la this mission. Sacchetti returned to Romo unsuccessful, leaving to M. the title of internuncie, with power to continue the negotiations and to effect M. first saw Louis XIII. a peace. at Lyons in 1630, and had a long conference with Cardinal Richclieu. The the highest eardinal entertained opinion of him, and feeling that Franco wanted an able and dovoted man in Italy, he succeeded in gaining the young diplomatist, who from this time openly showed himself favourable to the interests of France, and went to Parls at his invitation and through whose influence he was Oa the mado a cardinal (1641). death of his patron he succeeded to position and influonce with his ins position and influence while Louis XIII., and when this king died he nominated M. to the council of regency, presided over by the queen mother, Anne of Austria. After some time she made him Primo Minister and invested him with absolute authority. The first years of his ministry were signalised by the victories of the French over the of the French over torles Spanlards at Rocroy and Sens, which produced the peace of Westphalia. The same year that the latter was accomplished witnessed the commence. ment of the Civil War of the Fronde, in which the court, directed by M., had to contend with domestic maleontents and foreign enemics. Twice was M. compelled to yield to the storm raised against him and to quit France, but at length, as much by address as by force, he came off the conqueror in the struggle. In 1659 M. concluded the peace of the Pyronees, which put an end to the wars between France and Spall, and for diplomacy. The generals of his eemented it by a marringo between holiness, Contl and de Bagni, sent him successively to the Duca do Feria, general of the Spaniards, and little regretted. A courtier writing to the Marquis do Cœuvres, after-lat the time, says, 'Le roi est, ou

parait, le soul touché de la mort du cardinal. He had accumulated immense wealth by very doubtful or equivocal means. His fortune is said to have amounted to near eight millions sterling, all acquired in a period of external war or of internal commotion. On the approach of death he felt some scruples of conscience on the subject, which were, however, soon got over. The only productions of M. which have been published are his letters. Of these, thirty-six, written by him whilst acgotiating the peace of the Pyrenees, made their appearance in the year 1690, and seventy-seven more on the same subject were published in 1693. The whole were collected and re-

on the Mediterranean, is a suburb, with a coasting and fishing trade. Pop. 24,000.

own borse, and sent the animal off, leaving M, to his fatc. The horse carried him to his own distant residence, but M, fled to the Ukraine, joined the Cossacks, and in 1687 was alcosted the between the leave the leav elected their hetman. He won the confidence of Pcter the Great who made him Prince of the Ukrainc, but on the curtailment of the freedom of the Cossacks by Russia, M. conceived heldea of throwing off the sovereignty of the ezar, and so entered into nego-liations with Charles XII. of Sweden. These and other treasons were rerealed to Peter tho Great, who did not redit the informants, but afterwards being convinced of M.'s guilt, caused number of his accomplices to be out to death. M. joined Charles XII. and took part in the battle of Pultowa 9, to Bender,

ry has been

Mazères, a tn. of Franco in the dept. of Ariège, 27 m. S.S.E. of Toulouse. Pop. 3500.

Mazovia, a dist., well covered with pine and bireh, in the N. of Russian Poland. During the reign of Sigismund I. (1506-48) it lost its independence of 100 years' standing, and was incorporated with the Polish kingdom.

Mazurka (Polish for 'a woman of Mazovia'), a sprightly Polish dance, not unlike a polka. Chopin bas composed many heautiful Ms.; they are

written usually in & or † time. Mazzara del Vallo (ancient Mazara), Mazzara del Vallo (ancient Mazara), a city in the prov. of Trapani, Sicily, 13 m. S.E. of Marsala. The chief exports are corn and oil. Pop. 20,000. Mazzarino, a tn. in the prov. of Caltanisetta, Sicily, 15 m. S.E. of Caltanisetta. Pop. 16,000. Mazzini, Giuseppe (1805-72), an Italian patriot and republican, born in Genoa. He studied at the uni-

chronological order, and, together with fifty which is the including the most summer that the university of his native town and for them out which is the including the control of the control of the mout which is the including the control of the c having been employed by the Liberal party solely as a means for the great Pop. 24,000.

Mazeppa, Jan (1645-1709), a het-journals were suppressed and the man of the Cossacks. He became a page in the service of John Casimir, Carborani's secret society, and six king of Poland. A Polish nobleman, months later was betrayed and having surprised him in an intrigue banished from Italy. The organisa-with his wife, caused him to be tion of a new Liberal league, 'Young stripped naked and bound upon his latly,' was M.'s next work whilst own horse, and sent the animal off, from Marseilles, in consequence of end of Liberal propagandism, the journals were suppressed and the writers disbanded. In 1830 M. joined Carborari's secret society, and six from Marscilles, in consequence of the extensive operations of the society having been revealed to the authorities, compelled M. to hide for several months. The first fruits of La Giovine Italia was the revolutionary expedition of Savoy, organised by M. at Geneva, but which was defeated by the royal troops. Scatence of death. par contumace, was recorded death, par contumace, was recorded against M. in the Sardinian courts for his participation in the affair, but he soon recommenced with increased vigour his revolutionary operations. A new association, entitled 'New Europo,' and based on principles of European rights and enfranchisement was inaugurated by the exertions of M. in Switzerland. In 1837 M. quitted Switzerland for England, and finally took up his abode in London. From m by Byron, thence, his labours in the resolute combatant of partial

union and monarchical leadership Mazzuchelli, or Mazzuchelli, Gio-at Milan, M. retired to Switzerland vanni Maria, Count of (1707-65), an at Milan, Mr. Felified to Switzerland value man of letters, had charge of Austrians, to reappear in Florence on the rising of Tuscany and finally had given to Bresela, and was a coltate Rome, where he was elected triumvir amidst the triumphant requirements of the capital of Italy. His literature entitled Scrillori joicings of the capital of Italy. His tenure of supreme authority was marked by wisdom, moderation, and success. On the surrender of Rome by M.'s advice, he quitted the city and proceeded to Lausanne via Marseille. The conduct of France he bitterly attacked in public letters to De Tocqueville and others. He subsequently returned to London, and at his instigation risings in Milan



GUISEPPE MAZZINI

(1853) and in Piedmont (1857) were attempted. In 1859, while lending the whole weight of his influence to the revolutionary movemoats going on in Italy, he combated with vigilant foresight the threatened French prodominance, and refused to accord faith to the Liberal programme of Louis Napoleon. The Sicilian expedition of 1860 owed as much to the organisation of M. as to the licroic command of Garibaldi (q.v.). In 1870 he at · · His

Life and Writings (1864-70); sult Scritti editi ed inediti (18 vois.), pro-pared by 18 of A. Saffin .. l.A. Marriott, Everyman's Library.

quitles. His ambitious history of Italian literature entitled Scrittori d'Italia (1753-63) did not advance berond the letter B.

Mead, a fermented liquor made by dissolving honey at the rate of 4 lbs. to a gallon of water and boilof brewer's yeast per gallon of brewer's yeast per gallon is added, and after standlog for about elight hours it is poured ioto a barreto ferment. When fermentation ccases, a small quantity of sin-glass is added to clear the liquid. After bottling it is stored for six months or more, when it is ready for uso. Special licences for its sale are necessary.

Mead, Richard (1673-1754), an English physician, was appointed medical adviser to George II. (1727). He held the post of physician at St. Thomas's Hospital, London, from Ho wrote 1703-54. numerous treatises, and advocated quarantine and disinfection for plague, and inoculation for small-pox.

Meade, George Gordon (1815-72), an American general; West Point graduate. First won distinction in the Mexican War, where he attained rank of captain of engineers. Fought in the Civil War as brigadier-general of volunteers. In continuous service with the army of the Potomao, and was at the head of the Fifth Corps when the disagreement between Hooker and Halicck decided Lincoln to place M. in chief command of the Union army in place of Hooker. In July 1863 he defeated the Con-federates under Lee at Gettysburg, though his own casualtles were great.

Meadow Saffron, see Colencum. Meadow Sweet, or Queen-ef-the-Meadows (Spirar ulmaria), a tall plant (order Rosacce), with eem-pound cymes of fragrant, creamy-white flewers and pinante leaves. It is common in pastures.

Meadord, a 'n o' Ontonio, Canada, i Constant, a 'n o' Canada, Canada,

in Grey. co., c Bay, 20 m.

There is a fin .

Meagher, Thomas Francis (1823-67), an Irish patriot, born at Water-ford. He joined the Young Ireland party, and in 1848 was condemned to death for his resolutions. to death for his revolutionary propa-ganda. The sentence was commuted

to oxile, and he escaped (1852) to metio M. is the average value of the America, where, on the ontbreak of quantities, the geometrio M. is the civil war (1861), he organised the lish brigade for the Federals. He quantities, proved a fearless and gallant soldier. He met his death by drowning in the Missouri.

Meanter of Meiro (Colombia)

Meagre, or Maigre (Sciæna aquila), a fish, sometimes 6 ft. long, which is found off the S. coast of Australia and near the Cape of Good Hope. It has a short and a long dorsal fin, and the cleft of the mouth is deep and slanting.

Meni Tub Plot, a fietitlous piot hatched by Thomas Dangerfield with the connivance of a Mrs. Cellier (1679), when it was profitable to needy villains to concoct Imaginary piots against the king and the established religion, which from the papers found in a meal tub in Mrs. Cellier's house, seems to have been designed to implicate the Presbyterians and the Duke of Monmouth in a pretended plot to establish a commonwealth and overthrow Protestantism. Dangerfield, by turning king's evidence in another trial, secured a pardon, and Mrs. Celller was acquitted.

Meal-worm, the larva of a common beetle (Tenebrio molitor), frequenting mills, granaries, and bakehouses. It is thin and round, about 1 in. iong, and tawny in colour, with bright rusty bands. The bestie is 1 in, long, with stout legs and eleven-jointed antenno

and black and red in colour.

Mealy Bug, a homopterous inscot, hich does considerable harm to which plants in greenhouses by sucking the sap and by choking the pores of the leaves. The insects are minute and red in colour, but a covering of white mealy powder disguises them. males have wings but the females are unnoulty by spraying with in-secticide; fumication with tobacco smoke or eyanide of potassium is more effective.

Mean, in philosophy, is applied to a doctrine of Aristotellan ethics. According to Aristotle, virtue consists in finding the M. (το μέσον or μεσότης) between all extremes, because all desire tends to excess, and excess is the danger of life. According to the grounde exposition of it, this doctring is not merely a counsel of apathy, but that of a middle course between passion and apathy. See Aristotlo's Nicomachean Ethics, bits. i.-iii., and Stewart's Notes, 1892; Grant's Aristotle's Ethics (2nd ed.), 1886; and Wallaco's Oullines of the Philosophy of Vicitalia. Aristotle.

Mean, The, in mathematics, of two or more quantitles is an intermediate quantity determined by certain rules.

for its winding course.

Mearns, or Newton Mearns, a vil. of
Renfrowshire, Scotland, 7 m. S.W. of

Glasgow. Pop. (1911) 3201. Mearns, Tho, see Kincardineshire. Measham, a par. and vil. of Derbyshire, England, 4 m. S.W. of Ashbyde-la-Zouoh. Red bricks and terra-

cotta are manufactured, and there are coal mines in the vicinity. Pop. (1911) 2000.

Measles, an acute infectious disease, characterised by reddish eruptions on the body and catarrh of the mucous membranes of the airpassages, conjunctiva, etc. It is one of the commonest infectious diseases in England, occurring in scattered cases at all times, and in rapidly-spreading cpidemics at frequent intervals. It attacks children for the most part, and is usually disseminated by the congregation of children in school. The rate of mortality is low, but there are certain dangers arising from possible complications which render it desirable to prevent the frequent epidemics. Like small-pox, it is presumably caused by a micro-organism which has not yet been identified. Canon and Pielicke have isolated a minute bacillus that appears characteristic of the early stages of the disease, but its occurrence appears to be a result rather than a cause of the conditions set up by the disease. An attack of true M. (Rubcola or Morbilli) confers immunity from subsequent attacks to the end of life. The early symptoms are so indefinite that contagion often spreads before the disease is recognised. After from ton to fourteen days incubation, catarrh of the mucous membrane sets in. The eyes become red and watery, there is a watery discharge from the nose, a dry cough, sore throat, thirst, and restlessness, and a high temperature. After three or four days, small dark-red spots appear on the face and neck, and the face becomes swollen. The eruption nece becomes swollen. The eruption extends downwards until the whole body is involved. The rash fades away in the same order as it attacked the body. The red spots become yellowish, and the skin crumbles of in a powder resembling bran. The duration of the cruption from first to last is about a week and during to last is about a week, and during that time the febrile conditions increase until the temperature is about 104° or 105°. At the height of the quantity determined by certain rules, crease until the temperature is about The most common Ms. are the arith- 104° or 105°. At the height of the metic and geometric M. The arith- cruption the temperature usually

fails, and convalescence proceeds rapidly. The chief danger from M. arises from possible complications. Inflammation of the air passages may persist and lead to bronchitis and bronchopneumonia. The eyes may remain irritable, a degree of diarrhea may persist, or the general vitality of the patient may be so affected that llability to tubercular affections is increased. After rethe patient should bc sheltered from cold and unhygienic conditions for a lengthened period, as much of the mischief arising from M. is due to a premature neglect of the precautions proper to a state of convalescence. The actual fever stage in the mild form of the disease requires little treatment other than associated with febrile conditions generally. Efforts should be made to prevent the spread of the epidemic by isolating proved and suspected cases. Schools are usually shut when an epidemic threatens a neighbourhood. German measles, Rubella, or Roscola is a mild infectious disease characterised by an eruption similar to that of M., but in a milder form. Febrile symptoms are not marked or are absent altogether.

Measure. In mathematics a number is said to measure another number when it is contained an exact whole number of times in that number.

Measures. See WEIGHTS MEASURES.

Meat, a term formerly applied to food, particularly solid food. It is now restricted, except for a few surviving plirases, to butcher's meat, or the muscular tissues of such animals as muscular dissues of such animus as bullocks, sheep, pigs, etc. M. as an article of food owes its value to the large amount of available proteins it contains and its appeal to the appetite when well cooked. The supply of M. is now regularised by the adoption of methods of preservation by means of which the supplies of thinly populated countries are made available for the whole world, and for almost nny lengt tion

ning the preparation and shipment of M. from the Argentlue, New Zealand, Australia, etc.; and salting, or Im-pregnating with brine. The drying of M. for preservation for any length of time is now practically obsolete. M. extracts arc from that I

the soluble

tection of the public against unsound M. is in the hands of the medical officers and inspectors of nuisances attached to the various borough and district councils. The Public Health Act, 1875, and subsequent amendments, provide for the inspection of slaughterhouses and the destruction of M. shown to be unsound.

Meath, a marithme co. in the prov. of Leinster, Ircland, bounded E. by the Irish Sea. The surface is mainly flat, rising towards the W. The chief river is the Boyne, into which flows the Blackwater. Agriculture flourishes, oats being the principal graia crop; cattle and sheep are reared in con-siderable numbers. There are some woollen manufactures, and linen is woven by handlooms. There are some fine old ruins at Duleck, Beetive Abbey, and Clonard, and a castle at Trim, the co. tn. Tara, the supposed site of the old Irish capital, with its palace, referred to by Sir Thomas More, is in the co. The co. returns two members to parliament. 904 sq. m. Pop. (1911) 64,920.

Meaux, a tn. in the dept. of Seineet-Marne, France, on the Marne, 26 m. E.N.E. of Paris. It possesses a 12th-century cathedral. Dairy pro-

12th-century cathedral. Dairy produces and corn are the chief products; sugar, steel, and cotton goods are manufactured. Pop. 14,000. Mecca (Om Al Kora, mother of cities), one of the close towns of Arabia, the cap. of the prov. of Hedjaz, and, through being the birth-place of Mohammed, the central and most holy city of all Islam. It is situated 245 m. S. of Medina and about 65 m. E. of Jiddah, the well-known port on the Red Sea, In a narrow, barren valley, surrounded by bare hills and sandy plains, and watered by the brook Wadi-Al-Tarafeyn. The Inhabitants of M. make feyn. The inhabitants of M. make their living chiefly by letting their houses to the pilgrims (see HADJ). The inhabitants of M. make who flock hither to visit the Beit Ullah (House of God), or chlef mosque, containing the Kanba (q.v.). This mosque, capable of helding about 35,000 persons, is surrounded by nincteen gates surmounted by seven ninarots. A great number of people are nttached to the mosque in some kind of ceelesiastical capacity, as baths, muftis, mucddins, etc. It is katibs, muftis, mucddins, etc. It is protected by three castellated buildings, and is governed by a sheriff. The trade and commerce of M. hardiy deserve mention; the chief articles manufactured there are chaplets for M. and condensed to a small compass the pious pilgrims. Respecting the by evaporation in vacuo. The food-value of M. extract depends more upon the stimulating character of the material rather than on any amount of protein it may contain. The proleave it precipitately (see Hejira) in involve descriptions of most of the 622, returned to it and conquered it engines by which human labour is an 627. Within the course of the abridged or dispensed with. Finally present century, M. was taken by the it may be seen, therefore, that it is Wahabites (1803) but given up again of the utmost importance in structure the Beach of Franch Walanced and the confined to the Part of th to the Pasha of Eygpt, Mchemed Ali

place). MATIC Mecca, Me

made here. Permanent pop. (estimated) 60,000, floating pop. 100,000. See Snouck-Hurgronic,

Mecca, 1888. Mechain, Pierre François André (1744-1805), a French astronomer, André was handicapped in his astronomical studies hy the poverty of his father, but his pecuniary troubles were re-moved when his patron, Lalande, secured him the position of hydrographer to a government survey of the coast between Nionport and St. Malo. Ho worked also at the Paris observa-tory, and besides discovering eleven grounds, and belong clearly to the new comets calculated the orbits of school of Van Eyek. another twenty-four. From 1791 M. Mocklenburg-Schwerin, a grand was engaged in surveying the arc of the meridian between Rodez and Barcelona. Delambre's Systeme Métrique tells how accurately he ful-filled his task, and gives also a sym-pathetic picture of the man himself,

a victim to despondency and the stress of hostile circumstances. Mechanics, the science which considers the laws involved when bodies are acted on hy forces which keep Rostock, them in equilibrium or which

duce motion in them. Former study of M. was divided into study of M. was divided into and dynamics (n.v.), but, as explained made, and gypsum and salt are under Dynamics, M. is now resolved into statics and kinetics; the former obtained for this duchy and for branch treating of forces in equilibrium, and the latter dealing with forces acting so as to produce motion. Not only does M. deal with the direct action of forces on bodies, but it also studies the nature and action of Mecklenburg-Streitz, agrand duchy of Germany composed of two discontinuous. orium, and the latter dealing with forces acting so as to produce motion. Not only does M. deal with the direct action of forces on bodies, but it also studies the nature and action of forces when they act on bodies by the agency of machinery. This gives the origin of the word M., and as a matter of fact M. was in its early street the since of well-improphies. stagosthe science of making machines. cipality of Ratzeburg (type between A machine in M. means any con-Schwerin and Lubeck. Area 1131 trivance in which a force applied at sq. m. The country is flat and similar one point is made to reone point is made to r

or overcome a resisting

account of the application of these trates. Pop. 106,347.

'mechanical powers' in the content of the content of the application of the application

on the utmost importance in struc-tural engineering. Further sec Dyna-Mics, Kinetics, Statics, Kine-Matics, Force, Energy. Mechanicsville, a tn. of Saratoga co., New York, U.S.A., situated 17 m. N. of Albany. Has paper and pulp mills. Pop. (1910) 6634.

Mecheria, a com. of Algeria, situated about 145 m. S. by E. of Oran, at a height of over 1000 ft, Pop. 20,000.

Mechin, see Malines.
Mechenen, Mekenen, or Mechein,
Israel von (d. 1503), an engraver and
goldsmith, is usually identified with
the German painter, Meister Israel,
cighteen of whose works hang in the
Pinakotlek of Munich. They are re-

school of van Eyek.

Mocklenburg - Schwerin, a grand duchy of N. Germany, is bounded on the N. by the Baltic, L. by Pomerania, and S. by Brandenburg. Area 5068 sq. m. M. is watered by several rivers, the most important of which are the Elbe and the Warnow. The surface is generally flat, here and there intersected with hills, and well wooded. The principal towns are proceed. The principal towns are wooded. Schwerin (the capital), Ludwigsiust, Gustrow, and Wisman, chief Industry, chief Industry, is an important

nd machinery aro

of Germany, composed of two dis-tinct portions of territory, the grand duchy of Strelitz (lying to the E. of Mccklenburg-Schwerin) and the prin-

or overcome a resisting another point. All ma reduced down to three primary machines, viz. the lever, inclined plane, the main industry. The principal and nulley; and three secondary, derived from theso, viz. the wheel and axle, wedge, and screw, for the properties of cach of which see the articles dealing with each of them. These six machines are sometimes known as the Mechanical Powers. An isother with the properties of the application of these trates. Pop. 106,347.

Meconium and Meconic Acid. Both

opium. The former is a neutral substance, colourless, and without smell. The acid is crystalline, possesses a sour taste, and is soluble in water. The crystals are totally decomposed, and vaporised whom strongly heated. The salts of the acid are called designs of great contemperary expendents.

Meconopsis, a genus of hardy annuals or perennials (order Papavernece), several of which are grown in gardens for their large and decorative flowers. M. cambrica, with pale vellow blooms is the Welsh pony.

yellow blooms, is the Welsb poppy.
Medallions (from Fr. médaillon)
are large medals struck for a particular occasion. In architecture,
round or oval panels and tablets,
often decorated with designs or
figures in relief, are called M. in refer-

ence to their shape.

Medals. Numismatists have usually given the name of M. to those coins that have been struck or cast for particular purposes or on extraordinary occasions, in commemora-tion of viotories, treatles, corona-tions, and similar important events, or in honour of remarkable persons, in contradistinction to those which have been issued and generally cir-oulated as money. The art of en-graving dies for M., and the sister art of cutting stones in intaglio, such as seals, etc., are both of very ancient origin if reliance can be placed on the frequent allusions to signets in the O.T., e.g. Genesis xxxviii., Tamar o.T., e.g. Genesis xxxviii., Tamar ohtains a pledge of Judali by ro-quiring his signet, and again, Exo-dus xxxix., the stonos worn in the sacerdotal hreastplato were to be 'ilke the engravings of a signet, every one with ble name.' The extant Greek M. and medallions (i.e. a larger type of M.), though very rare, sufficiently prove that in this art, as in others, the Greeks attained their customary pitch of perfection. Few are of earlier date than the establishment of the imperial power at Rome and when Greece was under Roman dominion. If, however, the term M. be held to be included in 'colns,' of which there are abundant specimens belonging to different periods and divisions of the country, some idea of Greek styles in medal-casting may be readily inferred from their colnage. These coins bear on their obverse sides all manner of representations from heads or figures of divinities, monsters, and heroes, to sacred, natural, or artificial objects, and real or mythical localities, while the re-verse sides contain representations of things in some way related to those on the obverse side. The earliest are mainly of silver or electrum, though occasionally of gold; the later and pro-Roman are of gold, sliver, electrum,

in design, and less irregular in circumference. All the later coins are large flat bronze pleces with the heads of Roman emperors. Greek coins were generally struck from the designs of great contemporary ex-ponents both of the art of sculpture and of that of painting, though mainly the former. They give ac excellent index to the varying phases of sculpture, and in themselves cxhibit great judiciousness in the use of relief as Indicative of movement or instantaneous action. Perhaps the coins of the time of the painter Praxiteles exhibit the analyptic art in its highest development, the sentiment of the beautiful for its own sake being reflected in the shape of every object, e.g. on the decadrachms of object, e.g. on the decadracisms of Syragues, and in the greater claboration and delicacy of ornamentaticatian characterised the coins of the time of the great Phidias. The few extant Egyptian M. are all in the Greek style, and have, since the researches of Champolllon's (see Herrographical Professional Physics), great associate. GLYPHICS) great associate, Rosellin, been generally accopted as affording good representations of the different Ptolemalo kings and queens of Egypt, though the M. of Cleopatra by no means roycal the representation of the handsome and pleasing countenance that tradition Egyptian paintings concur in leading us to imagine. There are a number of both Greek and Egyptian M. to be seen in the British Museum among the collection of coins there. In ancient Rome there was no colnage, and therefore no striking of M. during the first three centuries of the city. On the institution of a colnage system copper money prevailed, and later sliver also was used. But we nover heard of M. belag struck, though from the flat lnartistle and monotonous stamping of the Roman coins it is to be inferred that such M. as may have been executed were far inferior to those of the Greeks. carliest examples of modern M. and medallions appear to be synchronous with the time of the Renaissance although there is extant a gold M. of David II. of Scotland, which is reputed to have been cast in the middle of the 14th century during his captivity in England. But from the 15th century onwards there is no lack of M. of all times and all countries. The period of the zenith of the art was between the middle of the 15th

The two great schools of the period inscription, indicating it as of the of its heyday were the Italian and the German, and the former is superior in that the designers show respect is a gold medal of the time of for the limitations of the art as set, Henry VIII., with the king's porces, by the shape of the M., and nover trait on the obverse and an inscription of the traffic transfer to the that deep not here on the overse and an inscription of the state that deep not here on the overse and an inscription of the state of the deep not be set to the traffic transfer to the traffic transfer to the set that deep not here or the overse and an inscription of the set to the set that deep not here or the overse and an inscription of the set that the deep not the set that the set tha ignoro the fact that clear-cut objects, scleeted with especial reference to the incident commemorated, are the best adapted to their purpose. There is consequently an absence of the essentially beautiful and elaborate in idealism, and of subjects mythical, fanciful, and allegorical, which, as noted above were characteristic of the Greeks; but there is a corresponding gain in fidelity of portraiture, relevance of subject-matter, appropriateness of grouping and emphasis of purpose, and there is no trace of that fondness for foreshortening which the Crctan engravers resorted to in order to compress as much into the circle as possible. A gold M. of the Council of Florenco, dated 1439, is one of the earliest, but a still earlier one, if authontic, is one attri-buted to John Huss in 1415. The M. of Vittore Pisano, the reputed restorer of the art, are of great merit. storer of the art, are of great merit. They are large, always east, and generally inseribed 'Opus Pisani Pictoris.' The papal M. commence with Paul II. (1464), those of pontiffs who lived prior to that date having been added to the collection by their successors. The German M. begin in 1453, are very numerous, display much originality and strength in treatment, but, are somewhat lacktreatment, but are somewhat lack-ing in the life and movement of work ing in the life and movement of work in relief; less obsoured with coplousness of detail. Sicilian M. appear as carly as 1501; Spanish, 1503; and Danish, 1516. The carliest Dutch M., of 1566, are notablo for their elaborate engravings of views, maps, and plans. The great names in the French mcdallist's art are those of Dupré and Warin. French M. prior to the time of Louis XIV. (1643prior to the time of Louis XIV. (1643-1715) exhibit no remarkable qualities, but practically the entire reign of that monarch was signalised by the striking of M. of splendid realistic design. The medallie history of Napoleon's time is of great extent, but reflects no great credit on the medallists of the period from the fact that they, like the lilléraleurs, were infected with the virus of a false describer and attempted to false classicism, and attempted to revert to models of a very conjectural antiquity. The series of icctural antiquity. The series of English M. is one of the most perfect as a series, but the M. are more notable

(q.v.) or designing book-plates (q.v.), early Italian manner. On one side is when it became a mechanical trade, a portrait and on the other a Latin The two great schools of the period inscription, indicating it as of the tion on the reverse side. The first coronation M. appears in the reign of Edward VI., and since then the series has been unbroken. In more than a numerous M. wero recent times numerous M. struck from the dies engraved by William Wyon, R.A., the principal engraver at the Royal Mint (c. 1850). Several were executed for benevolent societies established in the different maritime towns of England for the purpose of aiding shipwreeked or drowning individuals, and were pre-



sented as rewards where especial beroism was exerted on behalf of A particularly such unfortunates. fino M. picture (see the figure) was executed by Wyon for the Liverpool Shipwreek and Humane Society. It represents the rescue of a child and mother in the foreground and a drowning woman in the background. As to the group in the front of the design, consisting of a stalwart seaman, cyidently one of the ship wrecked party, stripped to the waist saving a mother and her infant, the designer has triumphed in bringing on the beautiful expression of maternal love in the woman, and of solicitude in the scaman, who, while saving the child first in accord with the obvious wishes of the mother, yet holds the latter firmly with his hand. The whole is a model of grouping and dramatio juxtaposition. The art of engraving M. and coins is of far more practical as representations of contemporary juxtaposition. The art of engraving events than as works of art. The M. and coins is of far more practical first is of 1480, and is executed in the importance than might generally be

character, has provod of character, has proved of great assistance to the historian and antiquarian, and hardly less valuable to the collector of articles de vertu. M. often afford information that cannot be obtained by other means, in the inscriptions, legends, and allegories which they contain expressly or by implication, and as already indicated a good series of M. of unimpeachable is one of the anthenticity anthorities that can be consulted for the state of the arts of design of any particular period. The striking of M. forms one of the regular functions of the Royal Mint, all M. bestowed by the Royal Society, or the London University, and army and navy M. being prepared in the die department. and even the making of the clasps and bars is now undertaken there.

Modan, a tn. of N. Sumatra, situated about 10 m. from the W. coast on the R. Deti. Pop. 12,000.
Mede, a tn. in the prov. of Payla, Lombardy, Italy, 22 m. W.S.W. of

Pavia. Pop. 6500.

Mcde, Joseph (1586-1638), an English scholar, took his M.A. degreo from Christ's College, Cambridge, in 1610, and was associated with his college as fellow and reader in classics for the rest of his life. His Clavis Apocaluntica is a reasonable exposition of the apocalyptic prophecies.

Medea (ancient Lamida), a tn. of geria, situated 40 m. S.W. of Algeria, situated 40 m. S.W. of Algiers. Pop. 15,200 (Europeans 3000).

Medea (Gk. Μήδεια), in mythology, a famous sorcoress. Greek was the daughter of Æëtes, King of Colchis, and the wife of Jason, with whom she fell in love when ho camo in search of the golden fleece. assisted him in his quest, and together with her brother, Absyrtus, emwith her brother, Absyrtus, embarked with him in the Arge, but being pursued by Æëtes she murdered her brother and seattered the parts of his body into the sea, thus delaying her father. At length she arrived at Ioleus with Jason, and from there they went to Corinth, where they lived happly for about ten years, until Creen, King of Thebes betrothed his daughter Glauce to Jason. This led him to desert M. and Jason. This led him to desert M., and for his faithlessness sho exacted a terrible revenge. She killed both the bride and her father by sending the maiden a poisoned robo and diadem. maiden a poisoned robo and diadem, Assyrians, their tribes united about and murdered her two soas, Mermerus 708 B.c., according to the common and Pheres, in her husband's sight. After this she fled from Corinth In a for their ohlef, and made Echatana car drawn by dragons, the gift of her apital. His son, Phraortes, or grandfather, Hellos, to Athens, where she married Ægens, by whom she had a son, Medas, who was regarded had a son, Medas, who was regarded lassar, Klug of Babylon overthrew

supposed. The study of such objects, Being forced to leave Athens she re-when of an historical or national turned with her son to Colchis and restored her father to the throae, of which he had been deprived by his own son, Perses. At Corinth she was deemed immortal, and was sald to have been the wife of Achilles in the Elysian fields, but elsewhere sho was merely regarded as an ancient queen.

Medellin, the chief tn. of the dept. of the same name, Colombia, 50 m. S.E. of Antioquia. It is an episcopal see and the second largest town of the There are rich gold and republic. silver mines in the vicinity. The inhabitants are chiefly engaged in the manuf. of jewellery, porcelain, and pottery. Coffee is grown and exported. Area of dept. 12,137 sq. m.; pop. 275,000. Pop. of tn. 60,000.

Medemblik, a maritimo tn. of Holland on the Znyder Zee, in the prov. of N. Holland, situated 18 m.

M.E. of Alkman. Pop. 3500.

Medford: 1. A city of Massachusotts, U.S.A., in Middlesex co., situated on the Jystic R. and lakes, 5 m. N.N.W. of Boston. The manufs. include woollen goods, food products, machinery, otc.; there are also brick works and carriage-hulldiag works. Works and caringo-named when the college is located here. Pop. (1910) 23,150. 2. A city of Oregon, U.S.A., cap. of Jackson co., 4 m. N.E. of Jacksonville, with sugar refluing and brewing industries. Pop. (1910) 8840.

Medgyos (Ger. Mediasch), a tn. of Hungary in Transylvaala, situated on the Great Kokel, 25 m. N.N.E. of

Hermannstadt. Pop. 8000. Medhurst, Walter Heary (1796-1857), an English missionary in China, born in London, was ordained at Malaeca in 1819, and after working in Penang and Batavla founded a mission in Shaaghai, with which ho was associated from 1842-56. If

was associated from 1842-56. He issued a very accurate version of the Biblo in High-Weu-II, his version being a rovision of the old Chinese text, and published also a Chinese dletlonary for the English.

Media, in anciont times, the name of the north-western part of Iran, corresponding to the present provinces of Azerbijan, Ghilan, Mazanderan, Irak-Ajemi, and the E. portion of Kurdistan. The Medians were in of Kurdistan. The Medlans were lu language, religion, and manners very nearly allied to the Perslans. After they had shaken off the yoke of the Assyrlans, their tribes united about

posed (560 B.C.) by his Cyrus (Kai-Khûsru), and from this time t

After the death of Medica Great (324 B.c.), the ut since (Atropatene) of M. became a separate present name. kingdom, and existed till the time of

named Artavasdes, against Mark Antony made war. Und

In early times the Medes were a warlike race, and distinguished for their skill with the how. They were also colobrated for their horseman-Persians adopted this and other

favourite oxercises.

Mediation, Act of, was the work of Napoicon, and was drawn up in 1803. The constitution which it claborated, though in itself an excellent thing, feil with its originator in 1813. There were to be nincteen cantons; the Diet was to meet in turn at the six large towns, and France was to guarantee the Swiss noutrality.

(Ger. Mediatisie-Mediatisation rung) is derived from Lat. mediatus, middle, and was coined to describe the process by which the title of eer-tain German princes has been sub-ordinated to that of other sovereigns, instead of being heid directly from the emperor. Many minor houses were mediatised in 1803, and again in 1815, at the congress of Vienna.

Medicago, or Medick, a large genus of herbaceous plants, belonging to the order Leguminose, the most important of which is M. sativa, jucerne or purple mediok, a valuable fodder plant.

Medical Association, British, was founded in 1832, and now has a membership of over 26,000. Its head-quarters are in London (429 Strand. W.C.), but there are now as many as Issues and unity six in the colonies, poned on the Student's Register, an Sir James Barr was president for 1912, intending practitioner has to produce and Dr. Dawson Williams edited the one of many specified certificates reofficial organ, namely the British lating to the subjects of general edublical Journal. Papers dealing with cation. A period of study of five years every department of medical science duration is thon entered upon. In the

the Assyrian empire about 604 B.C., are read at the annual meeting of the and vanquished the brigand hordes association. The attitude of the of Scytius. He was succeeded by his B.M.A. towards the National Insurson, Astvage (Asdehak), wito was de- ance Act was one of determined opposi---d although it failed to secure ary object—the complete re-of the bill—it did secure

are spoken of as one people. Ecba- a higher remuneration for those tana, the capital of M., became the doctors who went on the panel. summerresidence of the periodical of the panel summer tesidence of the periodical of the perio

Medical and Surgical Associa-ut since 1856 it has borne its

Medical Corps, Army, see ARMY. Medical Jurisprudence, or Forensic Augustus; the other portion, under the name of Great M., forming a part of the Syrian monarchy. M. was on science to questions of common law. several oceasions separated from A large body of scientific facts has Persia. In 152 B.c. Mithridates I. took been built up, having for its purpose Great M. from the Syrians and an the elucidation of points, as far as nexed it to the Partiniau empir and the results of the served Attention of t

concerning the duals and the

Mark Antony made war. Und
Sassanian dynasty, the whole of M. sonal injuries. So important has this was united to Persia. It became, legal aspect of medicine become that during the 14th and 15th centuries, medical jurisprudence is included as a the stronghoid of Turkoman tribes. subject of study in the training course In early times the Medes were a of every medical practitioner. Among warlike race, and distinguished for the subjects dealt with are evidences their skill with the how. They were of age, personal identity, pregnancy, also celebrated for their horsemanity, patornity, etc., as far as they ship, and it was from them that the are likely to have any bearing on the Downlead adopted this and other accountibility as in a state of the control of responsibility of an individual or his capacity for certain rights; and evidences of rape, abortion, death by poison, drowning, or hanging, possibility of live-birth in trials for intanticide, the identification of bloodstains, etc. See Dr. Guy's Forense stains, etc. Medicine; Medicine; Dr. A. S. Taylor's Principles and Practice of Medical Jurisprudence, and his Elements of Medical Jurisprudence.

Medicai Practitioner, an individual who practises the art of medicine; a qualified medical practitioner is one whose name is inscribed on the medical register of the General Medical Council in the United Kingdom. The General Medical Council was established by the Medical Act of 1858 to regulate the conditions under which persons entered the medical profession, and a register was insti-tuted to contain the names of quali-fied indlyiduals. The amended Act of 1886 defined the general scope of the qualifying examination, and gave the council seme measure of control over the corporato bodies licensed to grant dipiomas. The general requirements do not vary to a great extent among the diploma-granting bodies of the thirty-eight branches in the British United Kingdom. Before being carlisles and thirty-six in the colonies, rolled on the 'Student's Register,' an

elementary blology. Later on, the training becomes more purely proinciudes anatomy. fessional, and physiology, materia medica, and pharmacy, pathology, therapeutics, forensio medicine, etc., together with and medicine and surgery, including clinical instruction in a recognised hospital. In America the qualifications are not standardised to the same extent, but there is a tendency to insist upon a lengthened period of professional study, fellowed by state

examination. Medici, the name of an illustrious Florentine family. Cosimo de' Mediel (1389-1464), called 'pater patriæ' by his grateful fellow-citizens, was tie son of Giovanni (c. 1360-1429), who is justly regarded as the founder of that greatness which afterwards distinguished his posterity. In 1433 Cosimo was obliged to leave his native Florence and to seek refuge in Venice as the result of one of those sudden revelutions which are inseparably associated with the history of the Italian medieval republies. fellowing year, he wever, he was re-called, and until his death directed the fortunes of Florence, saving her from the ravages of war by his pru-dent alliances and skilful foreign policy, and using his enormous riches for the generous and enlightened patronage of art and literature. instituted an academy for the study of Piatonic philosophy, cellected a number of priceless classical and oriental manuscripts, which formed a splendid nucleus to the Laurentian library, gathered about his court some of the feremost painters, sculptors, and scholars of the day, and won golden opinions for his munifleence and generous charities. The name Medici adorned none mere iliustrious than Cosimo, unless it was his grandson, Lerenzo the Magnificent (1449-92). Lorenzo alse was the victim of the endiess family fouds, and narrowly escaped assassination at the hands of the influential and jealous Pazzi. He was, perhaps, even more lavish in his was, perhaps, oven into the taxon in in-patronage of learning than its grand-father. The academy which he founded for the study of the antique was largely responsible for the rapid dissentination over Europe of Greek and Latin literature as well as for the pro-eminence of Florence in the field of Renaissance culture. It was he who seized at onec on the vital importance of printing, and it was he who proeured, through John Lascaris, two - the monas-

ere destined

first years of the course the student is lection, tegether with the equally examined in physics, chemistry, and unique collection of ancient sculptures and vases, etc., was broken up and in part destroyed when the French sacked the oity, which was under the rule of Piere (1471-1503), the incompetent son of Lorenze. The astute politician Giulie (1478-1534), who rose to be Clement VII., was an iliegitimate son of Guillane, Lerenze's ill-fated brother. A second son of Lorenze, Giovanni (1475-1521), suc-ceeded to the papai chair as Leo X. Lorenze II. (1492-1519), grandson of Lorenze the Magnificent, exhibited all the incontinence and infirmity of will which mark a degenerate race, whilst the viciousness of his character was further emphasised in his natural Alessandro (1510 - 37), governed Fiorence as duke from 1530. the year of her tragic surrender to the emperor Charles V. Cosimo I. (1519-74), who was created Grand-duke of Tuscany in 1570, and Ferdinand I. (1549-1609), were descended from Lorenzo (1395-1440), a younger brother of the great Cosimo, The male line of the Mediel became extinet with Glovan Gastone (1671-1737), the soventh grand-duke. See Catharine de' Medici and Marie de Medici for the aillance of this house with the royalty of France.

Medici, Catherine de', see CATHERINE DE' MEDICI.

Medici, Marie de', see Marie De'

Medici.

Medicina, a tn. of Emilia, Italy, in the prov. of Belegna, 15 in. S.E. of the tn. of that name. Pop. (com.) 12,600. Medicinal Herbs. In medicinal times few plants were without their supposed medicinal value, but the progress of medleine has limited them to a very small number. With a special state department's aid, considerable attention is devoted to the culture of M. H. in the U.S.A., but in Britain, where in the Eastern countics a century ago their eniture was an important industry, they are little grown now, and considerable importations are received from India and other countries. Some plants, such as foxgiove, hemlock, beliadonna, peppermint, valeriau, and henbane, ean be grown in Britain better than eisewhere. Foxglove and hemlock need to have their juice expressed immediately after cutting.

Medicino, the seience of the treatment of disease; any substance administered with the object of earlies a diseased condition. The term is a diseased condition. The term is used sometimes to indicate that branch of the healing art which deals with Internal administrations as opposed to surgery or operative treatment. In its widest sense, however, already referred to. This unique col- M. includes all varieties of curative causation of disease, and kindred sub-According to modern conceptions, the study of M. involves first of all the study of analomy, or the strueture and form of the body, and physiology, or the study of function. Medical practitioners are called upou with diseased conditions. to deal hence pathology becomes part of the The treatment of general subject. diseased conditions is studied under the name of therapeutics, which, as far as it is concerned with drugs, involves a study of pharmacolagy. Operative treatment, or surgery, has soveral sub-divisions, of which dentistry is an im-portant example. Several branches of medical practice have been dealt with separately, of which obstetrics, or midwifery, is of overwhelming im- ledge on scientific lines. The revival A special aspect of the portanco. application of medical knowledge is indicated in the term medical juris-prudence. The development and classification of medical science has proeceded by gradual steps from very early times. Among the more primi-tive peoples, medical practice was an adjunct of the sacordotal function, and relied more upon the influence of the deity than upon any intrinsic efficacy in the methods adopted. Even t Greek Durely purely TA. T

tive mothods is associated with the name of the Greek physician Hippocrates (c. 460 R.C.), who was an outstanding member of a profession

principles of minuto observation symptoms which have grown into truths of biology method of clinical M. The general as domonstrated by Darwin led to the theory of the Hippocratio school postulated four humours in the human body. These were blood, pilegm, yellow blle, and black blle, and an improper proportion of the constituents was understood to he the cause of disease. Carcful observation was necess body humo

the available means of cure was combiued with assiduous observation of their offcets. When the victories of Alexander had disseminated Greelan knowledge throughout the known world, a school of physicians sprang up at Alexandria who founded what has been called the empirical school. That is, they observed effects instead of inquiring after causes, and huilt up Calgary, with wood-working a body of clinical experience which tories, iron, steel, chemical,

treatment, as well as discussion of the appears to have led to considerable success in practice. Romo produced the school of 'methodics' who assigned all morbid conditions to the too great constriction or too great relaxation of the porce separation the atoms of the body. The general treatment, therefore, involved increasing or decreasing the amount of constriction to the required extent by the use of drugs and by carefully adjusted dieting. All the medical knowledge of the ancients was co-ordinated and the results recorded by Galen, who lived in Rome in the 2nd century A.D. The study of his works was pursued in the monastic establishments of the middle ages, but the search after a universal principle militated against the development of medical knowway sonie

vhich had of Galen. nado hy

Linacre and others, and the study of anatomy, botany, and pharmacology proceeded apace. Scientific method, much as it helped forward the branches of knowledgo which were ultimately to cause great dovelop-ments in medical theory, did not, howover, have an immediately great effect on medical practice. Success was more likely to attend the efforts of the empiries who constantly sprang up, and overlaid with superstition as their theories were, nevertheless their knowledge of drugs and their skill in manipulation served them and their patients for better than somowhat dangerous dogma. In 1628 William which had already taken a distinot dangerous dogma. In 1623 William Harvey published his discovery of the clreulation of the blood, but it was some time hefore the importance of this phenomenon was adequately ess now becamo

> development of theories with far-reaching effects. In Germany, Schön-lein commenced a new era by his discovery of a parasite as the cause of the skin disease called favus. Baeteriological research led, in the hands of Pasteur and others, to the conceptions of toxins produced in the blood

radual, until the truths of blology

hy hacteria and to the anti-toxin evolved as a result of the intexication. Scarcely a month now passes without the recording of a new discovery in the causation of important forms of disease, thus opening up a way for subsequent investigators to formulate a cure

Medicine Hat ('tho town that was horn luoky'—Kipling), a tn. of Alherta, Canada, 180 m. E.S.E. of with wood-working faccement works. Important strikes of natural gas have been made in the district. It is one of the greatest flourmilling centres in the world. 16,000.

Medick, see Medicago.

Medina, a tn., 32 m. N.E. of Buffalo in Orleans co., New York, U.S.A., with electric power stations and manuf, of furniture and iron goods. In the vicinity are orchards. (1910) 5683.

Medina (Arabic for 'city'), or Medinat Rasul Allah ('city of the apostle of God'), a sacred city of Hojaz, 253 m. N. of Mecca in Western Besides the fort and the town proper, which is fenced with a rampart of massive stone masonry, there are the suburbs, where the peasants mostly dwell. The inhabitants are agriculturists, who profit by the natural fertility of the volcanle soil. Next to Mecca, M. Is the most secred resort of the Mohammedan pilgrims; for its spacious (420 by 340 sq. it.) and impressive mosque contains the tomb of the prophet. Pop. about 40,000.

Medina del Campo, a tn. of Spain in the prov. of Leon, 26 m S.S.W. of Valladolid. Thero is a fine old castle. Onco an important city of over 50,000 inhabitants, tho pop. has

dwindled to about 6000.

Medina Sidenia, a tn. in the prov. of Cadiz, Spain, 20 m. S.E. of Cadiz. The town stands ou a hill, and contains the old residence of the Dukes of Medina Sidonia. Pop. 11,000.

The highest Figure 1 of Middle liver, a profit in the prov., situated on the figure 1 of in the prov., situated on the figure 1 of inch agricultural the figure 1 of the figur pet. The training where the Egyptians are daily at the age I crocodiles kept

ia Lake Moeris. Pop. 41,400.

Medinilla, a genus of evergreen shrubs belonging to the order Melastomacere, with large leathery leaves berne on winged stems and large panieles or cymes of showy white or pink flowers, followed by ovoid berries.

Mediterranean Sea (ancleut Mare Internum), a great inland sea, bounded on the N. by Europe, on the E. by Asia, and on the S. by Africa, and communicating with the Atlantic by the Strait of Gibraltar, with the Black Sea by the Dardanelles, Sea of Marmora, and Bosphorus, and with the Red Sea by the Suez Canal. It has an area of about 1,008,000 sq. m., including its chief sub-flivisious, tho Tyrrhenian, Ionian, Adriatic, and Agean seas, and its extreme length

principal rivers being the Ebro, Rhono, Po, Arno, Tiber, and Nile. Italy, Sleily, and the shallows of the Adventure Bank, stretching from Sielly to Cape Bon on the African coast, divide the sea into an eastern and a western basin, of which the former has an extreme depth of 2187 fathoms and the latter of 2406 fathoms, while the mean depth of the whole area has been estlinated at 780 fathoms. The rivers bring but a small supply of water compared with the size of the sea, and owing to this and the great amount of eva-poration in such a latitude, there is a constant inflow from the Atlantic, and the water is salter than in the great oceans. Its temperature, too, at equal depths near the surface is on an average several degrees (Fahrelahelt) higher than that of the Atlantic. At depths of less than 100 fathoms, the water varies in temperature according to seasen and depth, but at great depths there is an almost constant and uniform temperature of about 55° F. In some places, under particular conditions, the tide rises as much as 5 ft., but taking the sea all over it may be said to be nearly tideless. The climate is warm and equable, the mean daily temperature being above 50° F. for at icast eight months in the year, but the M. peninsulas have a marked deficiency of rain, the middle of summer being remarkable for its drought. Among local winds may be mentioned the siroeco, a violent and dry, but hot, parehing, and dust-iaden southerly wind, prevalent much southerly wind, prevalent chiefly in Malta and Sielly, but occa-slongly, and far and Sielly, but occasloaally as far N. as Rome: the lereche, a similar wind experienced on the S.E. of Spain; the solano, a moist E. wind visiting the same regions; the mistral and bara, cold, dry northerly winds, the former of which prevails from the month of the Ebro

eastern parts of the sea, chiefly in late summer and autumn. The princlpal islands are Sielly, which divides the M. into an E. and W. pertion, Cyprus, Crete, Malta, and the Ionian Islands la the E., and Sardinia. Corsica, and the Balcarle Islands in the W. The most important gulfs are Taranto in Italy, Lepanto in Greece, Syrtis and Cabes in Barbary, in the E. portion; and Valencia in Spalu. Lyons in France, Genoa in Italy, and Tanis in Africa, la the W. The M. is frequently subject to earthquakes, and Vesuvius, Stromboli, and Eina are among the most famuus of its from 86 to 600 m. It has a drainage active volcances. The sconery of its area of about 3,000,000 sq. m., tho

and high table-lands predominating. The fauna of the M. is similar in character to that of the neighbouring enaracter to that of the heighbouring parts of the Atlantic Ocean, but a marked feature is the scarcity of life in the deeper parts. Fish are abunddant, especially tunny, anchovies, pilchards, and mackerel, and the finest coral, sponge, and ambergris are procured. Since the opening of the Sucz Canal the nearly ovster and are procured. Since the opening of the Suez Canal, the pearl oyster and various other molluses have come in from the Red Sea. The M. is 'the Great Sea of the Hehrews,' but the Phonicians were the first great agents in promoting the communion of peoples, and their flag waved in every part of the waters of the 'In-ternal Sea.' After them came the Greeks, who did much for trade, and even when Carthage had been deeven when Carthage had been destroyed and the Romans were all powerful, they still possessed the largest share of the commerce of the M., for the Romans despised all trade. In the middle ages the Venctians monopolised its commerce, and at present Great Britain has the main influence by the possession of influence by the Gibraltar and Malta.

Medjidie, the name of an Ottoman order, Instituted in 1852 by the Suitan Abd-ul-Medjid, as a recognition of both civil and military distinction,

this a silver sun with the crescent and star interspersed between its rays.

Mediar, the fruit of the M. tree (Mespilus germanica). It is about an inch in diameter and hard fieshed when fit to gather, but after storing for a few weeks, the flesh softens or bletts. The flavour is peculiar, but is relished by many. The tree is much branched and of dwarf habit, and is usually planted for its large white flowers and generally decorative of Europe (1804-6), etc. appearance.

Medmenham, a vil. c shire, England, famou

Thames. Pop. (1911) 500.

Médoc, a dist. of France, bounded on one side by the Gironde; famous for its claret.

Medomsley, a tn. in the co. of Durham, England, situated about 1 m. E.S.E. of Ebchester. It is engaged in coal mining. Pop. (1911) 5300. Medulla Oblongata, see BRAIN.

Medullary Rays, a term used in vegetable physiology, referring to radiating cellular bands which connect the pith with the cortex.

Medusa, see Gorgons. Medusæ, sce Jelly-fish. Medway, a riv. of England. Its source is in Sussex, and it flows through Kent to Rochester, from which town it forms an estuary, joining the R. Thames at Sheerness. The other towns on its banks are Tonbridge, Maidstone (to which town it is navigable), and Chatham.

Meannes, see Miant.

Mean Lap yan der the name of two

Meer, Jan van der, the name of two Datch painters of Haarlem, who were father (1628-91) and son (1656-1705). Both painted landscapes with cattle. The father excelled also in sea pieces and battle scenes, whilst the son, who had studied under Nicolas Berchem, and who was besides a charming etcher, was famous, above all, for his

studies of sheep. Meerane, a tn. in the kingdom of Saxony, Germany, situated about 9 m. N. of Zwickau. It manufs, wooilen goods and cloths, which it exports.

Pop. 25,406.

Meerkat, or Suricate (Suricata tetradactyla), a mammal, with soft and long grey fur, which is found in Cape of Good Hope, and which belongs to iong grey tur, which the decomposition of Good Hope, and which belongs the civit femily. A third of its length (14 in.) is occupied by the tail. The feeds on succeed bulbs, is Madagascar cat and the Cyniciis penicellata are also termed Ms.

Meerman, John (1753-1815), a Dutch historian, studied at Loyden, Leipzig, and Göttingen, where ho attended Heyne's lectures, and afterwards travelled very widely in Europe. Under Louis Napoleon he proved an indefatigable director of the fine arts

Meerschaum, a white or yellowish neral, composed of of magnesia. When

when was founded water. Hardness, 2 to monks in the beginning of the 13th 2.5. Is decomposed in hydrochloric century. Lord le Despencer founded acid with gelatinisation, and gives of a mock order of Franciscans here in water when heated. It occurs in beds 1756, commonly known as the 'Hell and in irregular masses in alluvial fire Club.' The village is prettily deposits at Lamos and Negropont. In situated near the banks of the lates. Asia Minor, Morocco, and in Spaln, whore it is used as a building stone. Its chief use is for making pipes and pipe bowls, being admirably adapted by reason of its lightness and porosity. It is first soaked in tallow and in wax and then polished; after long smoking it becomes well coloured.

Meerssen, a com. of Holland in the prov. of Limburg, 4 m. N.E. of Manstricht. Pop. 6140.

Meerut, the cap. of the dist. and div. of Meerut, United Provinces, British India, situated 40 m. N.E. of Delhi. To the N. of the city is a cantonment, and it is the site of a military station.

M. was the place at which the Indian Mutiny first broke out in 1857. Pop.

118,000.

Megalichthys, a genus of the extinct ganold fishes. The M. was about 4 ft. long, had big, smooth scales, was provided with two dorsal fins, and a set of strong conical teeth. Its fossil oceurs in carboniferous strata.

Megalonyx, a large extinct edentate whose fossil has been found in the U.S.A., was somewhat smaller than

the Megatherium.

Megalopelis, the most recent but the most important of the cities of Areadia, was founded on the advice of Enamine Leuetra (37

out of the i: villages. It-Mœnalia, ne

the Achean league. Philopomen and the historian Polybius were natives of Megalopolis.

Megaphone (from Gk. µéyas, great, and owin, sound), an instrument, invented by Edison, for faellitating the conveyance of sound for a distance of some miles. It consists of two large and tapering funnels.

Megapodidæ, see Mound Birds, Megara, the cap. of Megaris, a small dist. in Greece between the Corinthian and Saronio gulis. In ancioat times M. formed one of the four divsions of Attica. It was next conquered by the Dorlans, and was for a time subject to Corinth: but it finally asserted its Independence, and rapidly became a wealtby and powerful city. the Persian wars, M. was for some time at war with Corinth, and was thus led to form an alliance with Athens, and to receive an Athenian garrison into the city (461); but tho oligarchical party having got the upper hand, the Athenians were expelled (441). M. is celebrated in the history of philosophy, as the seat of a philosophical school, usually called the Megarian, which was founded by the Megarian, which was for Euclid, a native of the city.

Megaris, a small mountainous region of Hellas, or Greece Proper, bounded by Attlea, Corinth, and the sea. formed the north-eastern part of the Isthmus of Corinth. The capital was Megara, famous amongst the ancients for its white shell marble, and for a white klad of clay, of which pottery was made. From Euclid, the pillo-sopher, who was born at Megara, about 400 n.c., the Megarie school

took its name.

Megasea, a name for the Bergenla section of evergreen saxlfrages. They have large fleshy leaves, and bloom either in winter or in early spring.

Megasthenes, a Greek writer who lived in the 3rd century B.C. He was sent by Selouous Nicator as ambas-sador to the Indian King Sandrocottus, and spent some time at his court in Magadha in the valley of While he held that position Ganges. he compiled a historical and geographical work about India, entitled Ινδικά. This book, which written in the Attic dialect, is the chief treatise on that subject left us by the ancients, and on it are incorporated the records of both Diedorus and Arrian.

Megatherium (Gk. 'great beast'), a uadruped (18 ft. 10 order Edentata, Megaloayx, etc., Megatheriidæ. Its

found in the S. senia, ou the R. Helisson, which American Pampas deposits. The flowed through the city. It became structure of the lower law indicates afterwards one of the chief eitles of that it had a prehensilo tongue similar to the giraffe.

Megerlo, Ulrich, see ABRAHAM-A-

Santa-Clara.

Meghna, the estuary of the Ganges and the Brahmaputra, and enters the Navigation is sea by four mouths. somowhat impeded by a strong tidal wavo.

Megidde, an old fort, city of Palestine, generally supposed to have been situated in the plain of Esdrelon. It was hero in 608 B.C. that Josiah was killed in battle. In Roman times it

was known as Legio.

Megrim, see MIGRAINE Megrims, a temporary loss of voluntary power and movement in horses. r occur when

with a stlff Howing conssels in the

brain; the horse falls down and its pulse is very small. General attention to the animal's condition, the pro-vision of a more comfortable collar and less heavy loads cheek its recurrence.

Mehadla, a market tn. ia the prov. of Croatla-Slavoala, Hungary, 15 m. N. of Orsova. It was on this site that the Roman town of Ad Mediam was bullt, and the Hercules baths known In Roman times are near here. 2500.

Mehallet-el-Kebir (ancient Cynopolis), the cap. of the prov. of Gharbiyo, Lower Egypt, situated 45 m. S.W. of Damletta. Pop. 48.000.
Mohemet All, see Mohammed All.

Moblis, a tn. in the grand duchy of Saxe-Coburg-Gotha, Germany, 20 m. S. of Gotha. Pop. 6632.

Mehomia, or Raziog, a tn. of former European Turkey, situated 55 m. S.E. of Sofia, Pop. 8500.

Méhul, Etlenne Henri (1763-IS17). a French composer, born at Givet-

In 1779 though poor ho took planoforto lessons under Edeimann at Paris. By a happy chance he met Glück, who initiated him in the art of musical composition. The production of his first opera, Cora, was delayed, but meanwhile he made a sensation with his comic opora, Euphrosine et Coradin, 1790. The Cora met with no success, but M. soon reached the front rank with his Stratonice. His other operas include Adrien, Phrosine et Melidore, L'Irado, and Joseph, and he aiso composed numerous symphonics. Mohum et n. in the derre of Cher.

Mehun, a tn. in the dept. of Cher, France, situated on the Mcusc, 9 m. N.W. of Bourges. Manufs. textiles

and porcelain. Pop. 6500.

Meibom, Maro, or Meibomius, Marcus (c. 1620-1711), a German philologist and historian of music, an enthusiastic admirer of the music of the ancients (Lydian modes, etc.). Queen Christina of Sweden was for a timo his patroness. He became inter-professor of history at Amsterdam. His great work is Antique musice auctores septem grace et latine (Aristoxenus, Euolid, Nicomachus,

Province, Prussia, incorporated since 1905 with the tn. of Duisburg, with manuals of iron and steel goods.

Meiktila, a div., dist., and tn. of Upper Burma, India. The div. consists chiefly of a level plain, and large numbers of cattle are reared. chief products are rice, cotton, miliet,

three acts: also in collaboration with Gilie, Manon (1884), a fivo-act comic opera, to the music of Massenet; and Pepa (1888). His works are all lively vaudevilles in the stylo of Eugène Labeche. Ho was elected to the Académie in 1888.

Meinhold, Johann Wilhelm (1797-1851), a German poet, novelist, and divine. Lutheran pastor at Usedom (where he was born), Krummin, and Rehwinkel in Pomerania, till his retirement (1850). His poems and plays were not very successful, but his novels, The Amber Wilch (traos. by Duff Gordon, 1844) and Sidonia von Borek, or The Cloister Witch (trans. 1893), caused a great sensation.

Meiningen, the cap. of Saxe-Mciningen, Germany, situated on the r. b. of the Werra, 43 m. N.W. of Coburg. Some of the town is old, the Elisa-bethenburg being one of the buildings

of interest. Pop. 17,182. Meissen, a tn. of Saxony, Germany on the l. b. of the Elbe, 14 m. W.N.W. of Dresden, built partiy on two heights, the Afraberg and the Schloss-berg. The latter is crowned by a 13th century cathedral, and the Albrechtsburg, where 'Dresden' china was manufactured from 1710-1863, after Böttger discovered the art of making porceiain. The royal factory is now io the Triebisch valley. M. was founded about 928 by Henry the Fowler, and till the 13th century was the scat of Margraves, becoming merged in the kingdom of Saxony about 1423. Colin-an-der-Elbo was incorporated with M. in 1901. Furniture, pianos, and sewing-machines are manufactured as well as pottery.
Pop. about 33,875. See Reinhard, Die Stadt Meissen ..., 1829; Jüsohko, Meissen und seine Kirchen, 1902; Posse, Die Mark grafen von Meissen.

Meissonier, Jean Louis Ernest (c. 1815-91), a French painter, born at Lyons, was a pupil of J. Potier and L. Cogniet at Paris. His most charac-L. Cogniet at Paris. His most enaracteristic work depicts eivil and military life of the 17th and 18th centuries, or scenes of 'society' life, painted on small panels, and remarkable for exquisite finish and detail. The influence of the Flemish figure-painters is evident in these. M. was alasted to the Académia (1861) and ehief products are rice, cotton, miliet, in the influonce of the Fiemish figureand sesamum. The town of M. stands
on a lake. Area of div., 10,854 sq. m.;
of dist. 2183 sq. m. Pop. of div.
1,000,000; of dist. 250,000; of th.
6000.

Meilhao, Henri (1831-97), a French
dramatist, born at Paris. His numerdramatist, born at Paris. His numerdr 'A Chargo of Cavairy.' See works by Claretle (1881). Mollett (1882). Laurens (1892), Larroumet (1893), Gréard (1897), and Formentin (1901); Alexandre, Hist. de la peinture militaire en France, 1891; Dumas, Maltres modernes, 1884.

Meistersingers (Ger. master singer), Meistersingers (Ger. master singer), the name given to the German jyric poets of the 14th, 15th, and 16th centuries, who banded themselves into guilds for the revival of the national minstrelsy. Many schools for M. were formed in all parts of Germany, especially the S., perhaps the most famous being that of Nuremberg whilst under Hans Sachs. Each guild was divided ioto various classes from beginners or schüler, up to meisters or poets who could invent a new melody in addition to fitting new words to old tunes. Meetings were held weekly in the town hall or the church, and there were special competitions and festivals at Easter, Whitsuntide, and Christmas. The members of the guild regarded poetry and music too much in the light of crafts, in which excellence was attained by following certain rules, to produce any very great achievements, but their general effect was good rather than bad. After the 16th century the M. gradually died out.

Mejerda River, see BAGRADAS.
Mekinez, or Mequinez, a tn.
Moroeco, situated 35 m. W. by S
Fez, on n mountain slope. It is
summer residence of the sultan e

Mekleng, a scaport of Siam, on the Gulf of Siam, 44 m. S.W. of Bangkok. Salt is exported. Pop. 10,000.

Mekeng (Mekheng or Cambodia) River, the chief river of the Shm Peninsula, Indo-China, nbout 2800 m. Its exact source is unknown, but it rises in Tibet, where it is known as the Lau-tsang-kiang, its head stream probably being the Chiamdo-cher, parallel to the Upper Yangtseklang. It flows through the Chinese province of Yun-nan, the Shan country, Laos, and Cambodla, entering the China Sea by numerous mouths in Cochin-China. It forms n boundary between the British Shan states and French Slam, and between and French Indo-China, The rapids below Chien-hong a Kratie and other parts. The from the Tonie Sap (Great Bienhoa) joins the main ri

Mela, Pompenius, n Roman writer leaving two sons and two daughters on geography, probably contembriant by his wife, the daughter of a burger porary with the Emperor Claudius, master of that town, whom he had M.'s work is ontitled De Silu Orbis, It is divided into the contains a very high. contains a very brief -the various parts of th

Pnom-penh.

best editions of M. are by Gronovius some historic (Leyden), 1685, frequently reprinted; by Tzschucke, 1807; and the Bipont.

1809. M. has been translated into Euglish, by Arthur Golding, 1585 and 1590; into Italian, by Porcaechl, 1557; and into French, by Fradin, 1501; His style is closed. His style is simple. 1804. Melaleuca, a genus of Australashni

evergreen shrubs and trees (order Myrtaecie), with numerous economie

Melanesia (Gk. μελας, black, and ary son of Amythaon and brother of ρήσος, island, from the colour of the

endowed with prophetic powers.

Melancholia, a form of insanity
(q.v.). The patient becomes morbidly introspective and suffers from Insane delusions, and becomes suleidal. Re-covery from M. can be more com-plete than from any other form of insanity. Fresh nir, good diet, and careful exercise and attention to the bodily functions, are essential features in the treatment.

Melanchthon, Philipp (1497-1560), of Luther's fellow labourer in the Reetten, Baden. Sehwarzerde.

scholar, Joha the site of the Mulai Ismael mosque. Reuchlin, who was his relation, had Its chief manufs, are earthenware and leather. Pop. 24,000.
Mekla, a tn. of Algeria, situated 5 m. S.W. of Biskra Pop. 9000. Schwarzerde, a compound, meaning, in English, 'black earth,' received received the more melodious Greeked appellation of Melanchthen, by which alone he is now known. Ho was educated at Holdelberg. In 1512 he went to Tübingen where he became student and teacher, till oa his relative Rouchlin's recommendation he was appointed professor of Greek at Wittenberg (1518), it was here ho became acquainted with Luther. In 1521 he published his Loci Communes Rerum Theologicarum, the first great

> the cause Augsberg nsent, conitroduction rim (q.r.) itroversics. April 19.

on several of the Greek ssics, Latin poems, and

writings, were form ln 5 vols. and in 4 vols. fol. at Wittenberg ln 1564, again in 1580, and again in 1601. The nit works is In his . 1834 -60). See also Poucer's edition of his Works (1562-61). M.'s Life has been written by his friend Camerarius written by his friend Camera (q.r.), 1566, and frequently since.

b. 01

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of West-central Oceanica, between in Paris under Mme. M. Marchesi Micronesia (q.v.) in the N., and Polynesia (q.v.) in the S., inhabited mainly strong (1882). She first appeared in Vertical Paris and Polynesia (q.v.) in the S., inhabited mainly strong (1882). She first appeared in Vertical Paris and Polynesia (q.v.) in the S., inhabited mainly strong (1882). Bismarck Archipelago in the N.W. to the Fiji Is, in the S.E., and includes part of New Guinea, Santa Cruz, New Hebrides, D'Entrecasteaux, New Caledonia, Loyalty and Ad-New Caledonia, Loyalty and Admiralty Is. The islands are either of volcanic or coral formation, abound-ing in reefs and lagoons, with luxuing in reefs and lagoons, with luxurious vegetation. The inhabitants are treacherous and ferocious, cannibalism is still practised, and they are ethnically affiliated to the Papuans of New Guinea. They are short in stature, with frizzly hair and negroid features, denoting the intrusion of a cap. of Victoria, Australia, on the Papuans of victoria, Australia, on the Papuans of victoria, Australia, on the Papuans of victoria, Australia, on the Victoria of victoria, Australia, on the Victoria of v

inhabitants of the islands), the name | Spanish descent. She was educated nesia (q,x) in the S., inhabited manny jetting (1962). She may approximately by people of Papuan origin. The term London in 1886, but her real debut M. embraces all the islands from the was at Brussels (1887), as Gilda in Rigoletto, when she took the town by storm. As Lucia and Juliet at Covent Garden, London (1888), and in Paris (1889), she won further fame. She is now (1913) entering upon her twenty-fifth year of public singing at Covent Garden with a reputation

'. n. from the anchorcond most populous only being exceeded

nesian languago. animism combined with spirit worship. The islands are devoid of the larger carnivora, but rats, opossums, bats, mosquitoes, and reptiles abound. As M. stretches from 145° E. and 1° S. in a S.E. direction to the Tropic of Capricorn at 180° E., the islands vary in their flora and fauna to a very great extent, as also do their manners and customs. The inhabitants of some of the islands are proving amenable to European civilisation, and under good government and treatment aro showing many signs of improvement. For further details of the various groups of islands in M., see the separate articles, PAPUA, PACIFIC, etc.

Melanians, a family of fresh-water snails, abounding in most tropical and sub-tropical countries and numbering about a thousand species. The shells are spiral and turreted, and

are mostly of dark colours.

Melanorrhœa, a genus of tall evergreen trees (order Anacardiaceæ). M. usitata is the varnish tree of Burma. The varnish is obtained as a thick, white juice on tapping the tree, which turns black on exposure to the air; it has anthelmintic properties. wood is tough and very valuable.

Melanthacem, a natural order of bulbous, tuberous, or fibrous rooted plants, with white, green, or purple flowers, commonest in temperate

countries. Melba, Madame (néc Nollio (Helen) Porter Mitchell), a prima donna (soprano), born near Melbourne, (soprano), born near Melbourne, under Lora Gouetien, but I Manda Australia (whence her stage name for a short time in the government of man assumed). of Scottish and the Duke of Wellington. In 1828 he

its suburbs occupy a t. It is prettily situ-Their religion is ated on sloping banks overlooking tho bay, with wide streets and well-built bay, with wide streets and wear-united houses. It is the see of an Anglican bishop and of a Roman Catholic archbishop. The chief buildings of note are two fine cathedrals, houses of parliament, university, law courts, etc., while the city has numerous cathedral areas the parks and open spaces. Among the industries are browing, tanning, flourmilling, bacon curing, and brick making, while cheese, candles, pottery, cigars, clothing, woollen goods, and leather are manufactured. M. has a large shipping trade, its port, called Port Melbourne, is 2½ m. away, but vessels of considerable size can ascend the Yarra-Yarra to the heart of the city. There are wet and dry docks and safe anchorage for large vessels. Tho city is thoroughly equipped with tramway and train services. It was sottled in 1835, and incorporated in 1842. In 1849 it was created an

episcopalsec. Pop. (including suburbs and shipping) 593,237.

Melbourne, William Lamb, second Viscount (1779-1848), an English statesman, born in London. His university education he received first at Cambridgo, and at Glasgow. He entered the House of Commons for Leominster in 1805, and joined the Whis opposition, under the leader-ship of C. J. Fox. He accepted the chief secretaryship of Ireland in Mr. Canuing's government, and this partial alienation from the Whigs was increased when he not only took office

was transferred to the Upper House, | consumed. Althea then extinguished In 1830 he was Homo Secretary in the government of Earl Grey. In 1834, Earl Grey retired. and William IV. sent for M., and appointed him to the priemiership. On the accession of Queen Victoria in 1837, it became tho duty of M. to instruct the young Arter sovereign in her various duties, to fit hens. her to perform her part as the constitutional monarch. In 1841, his government was succeeded by that of Sir Robert Peel.

Melbye, Daniel Hermann Anton (1818-75), a Danish marine painter, born at Copenhagen. Originally a Originally a shipwright, then a musician. he finally studied painting under Eckersperg at Dusseldorf. Among his patrons were Christian VI., et Paris, Louis Philippe and Napoleon III., and the Sultan of Turkey (1853). His best pictures include: 'The Eddystone Lighthouse,' 1816; 'Sea-fight at Kjora, 1677,' 1855; and 'Le Forfait,' 1866.

Melabites the annual of the Christian Relabites the annual of the Portait, 1866. berg at Düsseldorf. Among his

Melchites, the name given to Christlans in Syria and other parts of the East, who, acknowledging the au-thority of the pope, and the doctrines of the Church of Rome, adhere to the liturgy and ceremonies of the Eastern Church. They conduct divino service in the vernacular tongue, and receive the Lord's Supperin both kinds. Their priests may be married before ordination, but not their bishops. They are chiefly to be found in Aleppo and Damascus. Their patriarch resides at

Melchizedek, a Canaanito priest. King of Salem in the time of Abraham (see Genesis xiv. 18). Called 'Priest of the Most High God' ('El-'Elijon'). Abraham acknowledged lis priest-hood by his offerlags. The identity of with Jerusolem has generally admitted. Ascet of Gnostles asserted M to be an earlier incarnation of the Second Person of the Trinlty, superior to Jesus Christ. The parallel drawn in Heb. vil. between Jesus and M has caused the view to appear frequently amon that M. was an licarnatl

Melcombe Regis, sec Meldola, a tn. in the prov. of Forll, Italy, 7 m. S. of the town of Forll. Pop. 1000.

Meleager, son of the Calydonian king Cheus, took part in the Argonautic expedition, and was the leader of the heroes, who slew the boar which laid waste the fields of Calydon. He gave the hide to Atalanta, but his mother's brothers, the sons of Thestius seized it, whereupon M. Thestlus seized it, whereupon M. slew them. When he was seven days old the Fates declared that he would 1874. A complete edition appeared die as soon as the piece of wood which (1814), and a posthumous one with was burning on the hearth should be an Ode to Nelson, 1830. See studies of

the firebrand, and concealed it in a chest; but now, to revenge the death of her brothers, she threw the wood into the fire, whereupon M. expired. Althea put an end to her life, and the sisters of M. wept for him until Artemis changed them into guinea-

Meleda, an island in the Adriatic Sea, belonging to the prov. of Dalmatia, Austria. It is 23 m. by 4 m., of volcanic formation, and has been identified as the ancient Melita. Pop.

1500

Melegnano (formerly Marignano), atn. in the prov. of Milan, Italy, 10 m. S.E. of Milan. It was the seene of the battle of Marignan In 1515, when the French defeated the Swiss. Slik and liven are manufactured. 7000.

Melencze, a tn. in the comitat of Torontal, Hungary, 50 m. S.W. of

Temesvar. Pop. 8500. Melendez Valdés, Juan (1754-1817) a Spanish poet, born at Ribera del Fresno, was a friend of Jovelianes, and for many years professor of law He was a sweet pasat Salamanca. toral and lyric poet, and was influenced by the Ideas of the French philosophical school. He sided with the French invaders of his country, and was oxided (1813). He died at Montpeller. His poems include the cologue, Batilo, 1780; odes, Tolhe Arts. To the Presence of God; elegies, Parting, and The Likeness. Ilis Poesias appeared in 1785. Soo Biblioteea de autores españoles, ixili., and Quin-tana's Life in vol. xix.; Mérméo's essay in Revue hispanique, i., 1891.

Meifi, a tn. and episcopal see of Potenza prov., Italy, at the foot of Mt. Vulture, 34 m. S. of Foggla. It was founded about 304, becoming the capital of Apulla under Norman dukes (1044). Its Norman cathedral was ruined (1851) by carthquake. Ollves, vines, and grain are cultivated Pop. 15,000.

Melford, Long, a par. in the co. of England, situated 3 m. N. of Pop. (1911) 2878.

Loch, a sea-foch of Argyll-shire, Scotland, 11 m. S. of Oban. Meli, Giovanni (c. 1710-1815), Sicilian poet. 110 practised medicine, and was professor of chemistry at Palermo University (1787). His canzonette, odes, and epigrams, are mostly in the Siellian dialect. His pastorals, ilko Eclophe Pescatorie, are exculsited. nd. In exquisito . my bo virtue of called a Parnasosiciliano contalns his 'Poesle.

bardo, Ital. Lit.

Melianthus, or Honey Flower, a genus of evergreen shrubs of the order Sapindacem, with graceful pinnate leaves and clusters or racemes of fragrant flowers which in some species yiold great abundance of honey.

Meilla, or Milla (ancieut Rusadir), a scaport garrison tn. on the N. coast of Moroeco, with a Spanish convict settlement and large eisterns and magazines. The harbour was opened (1902) as a port of commorce. Troubles arose at the mines near (1909), which led to military operations. Pop. (with garrison) about 10,000. See Monacco. Melilli, a tn. in the prov. of Syracuse, Sielly, 14 m. N.W. of Syracuse.

Pop. 6500.

Meiilotus, a genus of leguminous plants with trifoliate leaves, and onesided axillary racemes of small yellow or white flowers. M. alba, white meilot, or Bokhara clover, is grown as a fodder crop, but has a bitter taste and rapidly becomes hard and woody

Méline, Félix Jules (b. 1838), French statesman and economist. born at Remirement. Formerly Under-Secretary of State for the Department of Justice. He became a member of the General Tariff Commission in 1881. In 1883 he was nominated Minister of Agriculture in Ferry's first ministry, which post no held for nearly three years. During his tenure of this office no instituted the order of agricultural merit for agriculturists, who while meriting encouragement are not in a situation to aspire to the Cross of the Legion of Honour (Larousse). Elected deputy of the Vosges in 1885 in Ferry's second ministry. In the crisis of 1888, after the manner of the crisis of 1888, after the quarrel and duel between M. Floquet, president of the Chamber of Deputies, and General Boulanger, the ensuing elections returned an equality of votes for MM. Meline and Clemeneeau, the former having been put forward at the last moment by

ture, slilning in

at Amberg, in I sive used as a

shells. The process of manufacture is toria, and Den Skandinaviska Nordens not public property, but it is in all Historia. Many of his romantic novels probability a derivative of picric acid. have been translated into German.

Meli by Gallo (1836), Natoll (1883), alcohol with caustic potash, and Sanetis in Nuovi saggi critici; Lom-forms a crystalline solid soluble in water.

Melita, the ancient name of Malta

(q.v.).

Melito, a seaport in the prov. of Reggio, S. Italy, 15 m. S.S.E. of the tn. of Reggio. Pop. 5500.

Melito (or Meliton), Saint, an eccles. writer of the 2nd century A.D., the champlon of Catholic orthodoxy. He was Bishop of Sardis under Marcus Aurolius and apparently text part in Aurelius, and apparently took part iu tho paschai, Marcionite, and Montanist controversies. Only fragments of his works are extant, including the Extoya. See Eusebius, Hist. Eccles., iv.; Otto, Corpus Apologetarum ..., lx., 1842-72.

Melitopoi, a tn. in the gov. of Taurlda, Russia, situated on the N.E. of the Crimea peninsula. Pop. 17,000.

Melittis, or Bastard Palm, a hand-somo British perennial of the order Labiate with long ovato leaves and conspicuous flowers, creamy white and blotched or spotted with pink or purplo. It occurs rarely in woods in the S.W.

Melksham, a market tn. of Wilt-shire, England, on the Aven, 6 m. S. by W. of Chippenham, Manufs. inby W. of Chippennam, manuscript clude cordage, cocoa-nut fibre, indiaare baths near. Pop. (1911) 3102

Mellan, Claude (c. 1518-1688), a French draughtsman and engraver, a pupil of Gaultier at Paris, of Youet and Villamena at Rome. He early made engravings from the marbles of the Glustinian collection. His best works include 'St. Peter Noiasque'; 'Rebekuh,' after Tintoretto; 'Tho Sudarium of St. Veronica,' 1649 (portrait of Christ as imprinted on her handkerchief); VIII. (1631). portrait of Urban

Mellifont Abbey, the first Cistereian foundation in Ireland, founded (1142) by St. Malachy (1094-1148), 4 m. N.W. of Drogheda, in Meath co. It sur-rendered to Henry VIII.'s. commis-sioners (1539). Now in ruins, its remains wer K. F. B., Mellin,

Swedish novelist and historian, born Melinite: 1. A yellow clayey manual noted for his historical novels, which terial, looking like yellow ochre. It are very highly esteemed by his Amongst them.

Amongst them may be Flickorna i Askersund; allman; Helena Wrede, ällman; Helena Wreac, wrote Fäderlandels His

Melliphagidæ, see Honey-eater.
Mellisic Acid, a fatty acid which occurs in becs'-wax and carnauba deposits. Occurs in octahedrons with wax. It is prepared by heating melissyl octahedral cleavage, or in granular

honey-vellow: sp. gr. 1.65. Dis- may be green, searlet, or white. See solves in nitric acid; decomposed by also WATER MELON. boiling water.

Melmoth, William (1666-1743), an English lawyer, and anonymous author of The Great Importance of a Religious Life (1711). He commented on the immoralities of the stage in the

form of letters to Defoc. Melmoth, William (1710-99), an English littérateur and eloquent prose-writer, son of above. He wrote Fitzosborne's Letters (1742). translated Pliny's Letters (1747), and some of Cicero's works (1753-77). His Memoirs of a Late Eminent Advocate, 1796, deal with his father's life. Scc Nichol's Literary Anecdotes, li., iii. (1812).

Melnik, or Melenik: 1. A tn. 65 m. N.N.E. from the town of Salonica. Pop. 5000. 2. A tn. of Bohemia, Austria, on the Elbe, 18 m. N. by E. of Prague, noted for wine and apricots. Pop. 5436.

Melo, or Villa de Cerro Largo, a vil. of Uruguay, cap. of Cerro Largo dept. on the Tagorari 200 m. N. N. W. of

on the Tacuari, 200 m. N.N.W. of Monte Video. Pop. 6000. Melocactus, a genus of tropical caeti, mostly natives of S. America, with an unbranched globular or conlcal stem bearing ridges from bottom to top covered with clusters of spines. At the top is a small cylindrical spiny cap. M. communis, the Turk's cap cactus, bears rose-red It requires a high, dry temperature.

Melodeon, a musical wind instrument with a row of reeds, and operated by keys.

Melodrama, originally a musical drama, or a drama interspersed with drama, or a drama interspersed with vocal or instrumental music. Now it is generally a non-operatic play of a semi-tragic or scrious character, wherein surprises, acts of violence, dancing, music, and comic occurrences are all mixed together, to excite and sustain the attention of this typo la the English language of the English language of t Henry Irving's

Lyons Mail, and Melody, a succession of musical rubber shoes, sliver and leather goods sounds so arranged as to have a Pop. (1910) 15,715.

pleasing effect on the ear. It differs Meltham, a par. and in. of the W. from harmony in being only the prodnetlon of one volce or lastrument,
whereas harmony is the result of the
blending of different volces or sounds.
Moion, the fruit of Cucumis melo
Moion, the fruit of Cucumis melo
Moling thechange of physical state

Molon, the fruit of Cucumis melo (order Cucurbitacere), a valuable tropical plant which has been cultivated for many centuries. In Britain this almost invariably grown in pits in the case of pure substances which

nodules. Hardness 2-2-5; colonr, or hot-houses. The colonr of the flesh honey-yellow; sp. gr. 1-65. Dis- may be green, searlet, or white. See achieve in the colons in the colons in the colons of the flesh may be green, searlet, or white. See

Meloria (ancient Manaria), a small island in the Mediterraneau, 4 m. from Leghorn harbour. The Genoese

here defeated the Pisans at sea (1284), Melos, or Milo: 1. A Greek island in the Ægean, one of the S.W. Cyclades, 70 m. N. of Crete. Mt. Prophet Elias is 2548 ft. high. Minerals abound. Near Kastro or Plaka (cap.), by the ruins and catacombs of ancient M., the Verms of Milo (now in the Louvre) was discovered (1820). Pop. 5400. See Excavations at Phylakopi, by Evans, Hogarth, and others (1904). 2. A tn. of New York, U.S.A., in Yates co.. lying between the lakes of Kenka and Seneca. Pop. (1910) 6088.

Melpomene, in Greek mythology. the muse of tragedy. She is generally represented fully draped, with a calm expression, holding a bearded, open-

mouthed mask.

Melrose (Celtic maol ros, bare moor)
1. A tn. of Roxburghshiro, Scotland,
on the Tweed, at the foot of the triple
Eildon Hills, 37 m. S.E. of Edinburgh.
The famous Clstercian abbey was
founded (c. 1136) by David I., and is
celebrated by Scott as 'Kennagnhair.'
Darthy determed by Edward I. Partly destroyed by Edward II. (1322), and Richard II. (1385), it was wrecked during Lord Hereford's expedition (1545), and by the Reformers. The Decorated and Perpendicular styles prevall, and its beautiful traceried windows are famous. It contains, inter alia, the tomb of Alexander II., the heart of Robert the Bruce, and the reputed tomb of the wizard, Michael Scott (1175-1234). Abbotsford, the resi-

and Spot Pond, a large Maunis. laclude boots,

and l

do not decompose chemically under all being to draw a glass tube out the action of heat. The presence of to a very fine tube and seal one end. cter-

ning molecular weights. As an illustration of the fact that the presonce of im-purity lowers the melting-point, it may be noted that salt is used to remove ice from pavements. In the caso of the determination of molecular weights, it is found that the freezing-point of a dilute solution of a given substance is depressed below that of the pure solvent by an amount proportional to its concentration, i.e. the mass of dissolved substance per 100 grammes of the solvent. Freezing mixtures also depend on the fact that the presence of impurity depresses the melting-point. Some solid substances contract in volume when melted, while others expand. Tbis can be shown more clearly by concan be shown more clearly by con-sidering the reverse operation, i.e. solidification; thus a substance which contracts on melting will expand on solidifying. Taking water as an instance we find that when water freezes its volume increases. This explains the bursting of pipes in winter, and also the fact that ico floats in water, since, because of this expansion, volume for volume, it is lighter. On the other hand, solid paraffin wax sinks in liquid wax, showing that liquid paraffin wax contracts on solidification.

Increase of pressure : on the melting-point, crease be large. Then press or clevate the melting-point according to the substance. This increase of pressure lowers the meltingpoint of icc. The making of a snow-ball illustrates this point. The snow is pressed together, causing some of the snow to melt, and when the pressure is removed this melted snow into a

ployed lies of o tako in an

iron foundry. In the latter case bodies which expand on cooling are used so that every corner of the mould may be filled.

Melting-point. Each substance be- Hence

gins to which i under

determination of the M. of a substance is very important in the methods of organic chemistry, and affords a ready method for the dethe determination of the M. of a substance is very important in the Melville: 1. An island off the coast of North Australia, separated by tection of the presence of a substance.

Many methods are employed to determine the M. the most common of the subject of one ries in 1387. See Dunlop, the stance is very important in the Melville: 1. An island off the coast of the most common of the subject of one ries in 1387. See Dunlop, the most common of the most constant of the most constant of the most common of the most comm mine the M., the most common of was discovered by King.

--- noint | Very small pieces of the substance are introduced into the tubo which is then tied to the bulb of a mercury thermometer. Both are immersed in a bath of water or some other liquid, which is heated until the substance melts. The substance may then be allowed to cool and the temperature at which solidification commences can be obtained. The substance is again melted, and the M. read off on the thermometer. Three or four readings may be taken in this manner, the M. being the mean of the readings.

Melton, a par. and vil. of Suffolk, Eugland, on the Deben, 9 m. E.N.E. of Ipswiel, with machine works. Pop. (1911) 1600.

Melton, West, a par. and vil. of tho

W. Riding, Yorkshire, England, 5 m. N. of Rotherham. Pop. (1911) 3700. Melton Mowbray, a market tn. of Leicestershire, Englaud, on the Eyc, near its confluence with the Wreake, 15 m. N.E. of Leieester, noted for pork pies and Stilton cheese. There are fron ore quarries near, and smelting and blasting furnaces. It is also

noted as a buntlug centro. (1911) 9203.

Melun (ancient Melodunum), cap, of Scine-et-Marne dept., France, on the Scine, 28 m. S.E. of Parls. It has medlæral clurches, a Renaissance town hall, and a ruined palace. M. was captured by Henry V. of Eug120). Manufs. luclude liuens, weallers, pottery and

woollens, pottery, Pop. 14.000.

Melusina, or Melusine, in French folklore, a water fairy, half-woman and half-fish; the daughter of Elinas. King of Albania. She married Count Raymond on the condition that he would never seck her on Saturdays, when she was accustomed to shut herself up alone. When they were married she built him a castle called Lusignan Castle. Raymond broke his promise, and did visit her on a Saturday, so she chauged into a scr-pent and escaped from the castle by a window. Since her escape she was supposed to have visited the castle, uttering eries a little time before tho death of the lords of Lusignan. Hence the expression 'Cris de the

which is still heard in some in France. Jean d'Arras legend the subject of one

Melville: 1. An island off the coast of North Australia, separated by Clarence Strait from the mainland. It is 70 m. loug and 30 m. broad, and

largest of the Parry 1s. in the N. Polar Sea, Arctic America, separated (W.) by Fitzvilliam Strait from Prince Patrick Is., by Melvillo Sound (S. and S.E.) from Victoria Land and Prince of Wales' Land. It was discavered and named by Parry (1819-20). Length 200 m., breadth 130 m. peninsula fn N. Canada, 3. A peninsula in N. Canada, bounded W. by Boothia Gulf, N. by Fury and Heela Strait (separating it from Baffin Land), E. by Fox Channel. Length 250 m., average breadth 100 m. 4. A sound, 250 m. long by 200 m. broad, communicating with the Arctio Ocean and Baffin Bay, S.E. of Melville Is.

Malville (Melvill or Melvine)

Melville (Melvill, or Melvine), Andrew (1545-1622), a Scottish scholar and reformer, rankling next to Kuox as a national benefactor, born at Baldovic, Forfarshire. After leaving St. Andrews with a high reputation for learning, he set out for the Continent (1564), becoming regent of St. Marecon College at Poitiers (1566). Leaving for Geneva owing to political troubles (1568), through Beza's Influence he was appointed professor of humanity at Geneva Academy (1568-74). On returning to Scotland, he became principal of Glusgow University 11574-80), and roudered the highest to Knox as a national benefactor, (1574-80), and rondered the highest services to Scottish education. Ho was principal of St. Mary's College, St. Androws (1580-1607). A staunch and fearless champion of Presbyterianism, lio was one of the fore-most in bringing about the fall of episcopacy in Scotland, and helped to draft the Second Book of Discipline 1581). His extreme and outspaken views frequently brought him spaken views irequently brought him into disfuvour. He was forced to fleo to England (1584-85), but then returned and was made rector of St. Andrews (1590-97). Summoned with other ministers to London (1696) to confer with James 1., he was imprisoned in the Tower till 1611. James refused his netition to return to Scotlaud, and he accepted the cbair of biblical theology at Sedan. See Lives by M'Crie (1819), Morison (1899); Lang, History of Scotland, 1902; Gardiner, History of England, 1603-16, I. 9.

Melville, G. J. Whyto-, sec WHYTE-

MELVILLE, G. J.
Molvillo, Henry Dundas, first Viscount, see Dundas, Henry.

MELVILLE, U. J.

Molville, Henry Dundas, first VIscount, see Dundas, Henry.

Melville, Herman (1819-91), an American novelist, born in New York, and served as a sailor for several years. His ndventurons life provided him with the material for Typee (1846), an account of his residence in the Marquesas, and Omoof 1847), which dealt with Oceania. The best of his subsequent books were:

largest of the Parry Is. in the N., Mardi, 1818; White Jacket, 1850; and Moby Dick, 1852.

Melville, James (1556-1614). Scottish reference, born near Montrese: ho was a nephew of Andrew, whose fortunes he shared to a large extent, becoming under him tutor in Glasgow University (c. 1575), and professor of Oriental languages at St. Andrews (1580). From 1586 he took an active part in church controversy, and was moderator of the General Assembly (1539). Summoned to London with his uncle (1606) on the latter's imprisonment, he was forbidden to return N. beyond New castle-on-Tyne. 11 Diary, 1556-1601, was printed by the Bannatyne

Gub (1829), and by the Wodraw Society (1842). Melville (or Melvil), Sir Jamos, of Halhill, Fifeshire (c. 1535-1615), a Scottish soldier, historical writer, and diplomatist. He was page and, later, privy councillor to Mary, Queen of Scots, and accomplished various seots, and accomplished various missions for her. His Memoirs of My own Life, first published by G. Scott (1683), were edited by Thompson (Baunatyne Club, 1827-33). See Frondo, History of England, vili.; and Chambers, Biographical Dietionary of Eminent Scotsmen.

Melykut (deep well), a com, and tn. of Baes-Bodrog prov., Hungary, 17 m. from Maria Thereslopel, Pop.

8000.

Melyris, a genus of metalllo coloured. beeties, with long narrow bodies; natives of the Cape of Good Hope.

Melzi, Francesco, Il Conte (c. 1491-Meizi, Francesco, It Conte (c. 1491-1568), an Italian amateur painter, of a noble Milanese family, friend and pupil of Leonardo da Vinel. The 'Vertumnus and Pomono' at Berlia is often ascribed to him. To him is due the preservation of Leonarde's writings, which, with other belong-lugs, were bequeathed to him. Mambrane, in anatomy, Indicates

Membrane, in anatomy, indicates the textures of the animal land which, arranged as lamine, cover organs, line the interiors of cavities. and take part in the formation of the walls of canals and tubes. For mucous membrane see Digestion and EPITHELIUM; for deciduous mem-branes which enclose the feetus, see See also Senous Mem-PLACENTA.

DRANE.

breweries, and manufs, of machinery, definitely call of the common of th the Niemen (Nyeman). Rising in Minsk government, it flows W. to Grodno and enters the Kurisches Haff by the Russ and Gilge mouths. Near Grodno a canal connects it with the Bober and the Vistula. It is important for trade.

Memline (Memling, or Hemling), Hans (c. 1430-94), a Flemish painter, the place of whose birth is uncertain. Ho settled down in Bruges, prohably about 1478. All that is known of him is that he had a considerable amount of property, that he was married, and had three children. His works were well known in his own time, for he painted a 'Virgin and Child 'for Sir J. Daine, and his 'Last Judgment' and the shrine (1480) containing the relies of St. Ursula in the museum of the hospital of Bruges were very famous. M.'s Bruges were very landous. Al. & colouring is heautiful, and his figures are very fine; of all the Flemish masters of the 15th century, only the brothers Van Eyck are superior to him. See W. H. J. Weale, Hans

Memini, 1901.

Memmi, Lippo, dl Filippuccio (d. 1356), an Italian painter, brotherin-law of Simono dl Martino, with whom he often worked. Most of his work was done between 1332-51. The fresco over the door of the convent of the Servi at Siena and a small Madonna in the Berlin Museum are the finest of the works attributed to

'Menmi,' Simone, Simone di Mar-tino, or Simon of Sienna (c. 1283-1344), an Italian painter, pupi of Duccio. He was a friend of Petrarch, and painted portraits of Laura and Petrareh, while the poet dedicated two sonnets to him. He shared the 'Gothie' ideals of the Pisani, his influence on the Sicnese school of painting being evident for the following two centuries. The frescoes in the church of Santa Maria Novella at Florence are his, The Annunciation in the Uffizi, and the triptych in Antwerp Gallery. See Vasari, Lives of the Painters.

Memmingen, a tn. of Bavarla, Germany, 33 m. S.S.E. of Ulm. It trades principally in cheese and hops, and manufs, woollen and cotton fab-

whose honour colossal statues were creeted near Thebes. One of these was supposed to give forth musical sounds at dawn whon touched by the sun's rays. See Quintus Smyrnæus, Posthomerica, li.; Rawlinson on Herod., ili., 264; Jaeobs, Ueber die Grüber des Memnon, 1830; Curzon in Edinburgh Revier, 1886; Gardner Wilkinson, Topography of Thebes. Memoirs, see Biography. Memory. Knowledge depends

npon perception, and lasting know-ledge would be impossible if impressions produced by acts of per-ception did not persist after the removal of the object. In this manner. for instance, we may get after per-cepts, as when after looking at the snu we see yellow dises, whether the eyes are open or closed. In addition to these atter-images which are occasional and furitive, distinct and vivid impressions beget mental images, which endure for a very long while, These too gradually die away, and are of little account for knowledge. Picturing or mentally representing an object, implies the mental capability of having permanent images. We thus suppose an ability to recall, revive, or recover a past impression after an interval, and all such re-vival of perceptions is known as imagination. The simplest kind of lmagination is known as reproductive imagination, in which the representa-tion follows the order of perception, and M., or the recalling of particular impressions and pieces of knowledge, as opposed to the retention of general truths, falls under this head. The capability of representing an object or event some time after perception depends upon: (1) The depth of the impression, i.e. the degree of force with which it was stamped on the mind, and (2) upon the force of association, i.e. the presence of something which suggests the object to our minds or reminds us of it. The depth of the impression will ob-viously be greater for actual impression, e.g. a seeme visited, than for products of magination, e.g. a scene described. Further, it also depend-upon the degree of interest aroused in the object with the corresponding degree of attention given, and, again, it will depend upon the frequency of the repetition of the impression. It is well to note here that it is the fre-quency, and not the number of the repetitions, that counts. The reries and soap. 1ron 10011112 the repetition of the frecarried on. Pop. 12,362.

Memon, in Greek legend, son of
Eos (dawn) and Tithonus. He fought
for his uncle, Priam of Troy, against repetitions, that counts. The repetition must easue before the effect
was slain by Achilles. Also repretions that counts. The repetition must easue before the effect
most important of the various

methods . viation impressions more easily than others. bu contiau of impressious Thus wo time. to dds the tide, the flash and the sound of an explosion, and cause and effect. Physiologically, this is explained by the fact that two nerve structures, which have repeatedly acted together, acquire a disposition to so act in combination. The associative force is not in all cases of the same strength, and it depends mainly upon the same two principles which, as we have seen above, control the depth of the impression. In addition to the association by contiguity, there may be association by similarity, contrast, etc., and further, association may be so complex that becoming divergent may tend to confuse, and so become an obstructive association. In states of reverie, we have a series of images floating through our minds without any reference to the corresponding Wo picture objects experiences. without reflecting where or when we have seen or shall see them, but in all other cases we refer images to some place in the true order of our experience. Thus, if we refer, then, to the past, we are exercising M., and if to the future, expectation. The nsychological distinction between M. and expectation involves the fact that M. is a comparatively passive state of mind, while expectation is of tension, effort, or strain. Both states involve the representation of time, the former involving reference to the past, and the latter to the future. Children attain clear ideas about positions of objects in space, before they have any definite ideas about the succession and duration of events. It may be said that 'the higher the sense in point of discriminative refinement, the hetter the corresponding memory,' so that we recall sights best, then sounds, touches, tastes, and smells in the order given. The power of storing up new impressious reaches its maximum in early youth, probably because the brain later becomes more set, and will not undergo the structural changes necessary for mental acquisition so easily. M. may be improved by exercise and by following certain principles fail down Some excel in their points of whole, c.g. Pascal, but generally in some special direction that difference appears. The differen are either native or due to the the Lombard campaign (1859), being amount of exercise given by various present at Palestro and Solferino. Me persons during the past life. General was Muritor of Marino in the Ricasoli ally, however, the difference mative, as from the first some dren are capable of retaining certain He was seut as

See Association of IDEAS, MNEMO. NICS, PSYCHOLOGY, and TRACHING. Memphis: 1 of Lower Egy standing 12 m . to have been : historical King of Egypt, and became historical King of Egypt, and became the first capital of the entire kingdom of Egypt. It grewtogreat importance under Pepy or Apopi I. (c. 1700 B.C.), who built the pyramid 'Men-nofer' near by. Among its uumerous ancleat buildings were tomples of Ptah. or Hephiestos, of Isis (6th century B.C.), of Serapis, and of Ra. The pyramids and statues of Raineses II. renain, and the ruins of Sakkara close by and the ruins of Sakkara close by. The Noph of the O.T. (Is. xix. 13; Jer. ii. 16) is probably M. The city declined rapidly after the Arab con-quest. The modern village of Mit-Rapineh (Mitranieh) in Gize province inarks the site. See Smith's Diet, of Greek and Roman Geog.; Poole, Cilies of Egypt; Quibell, Excavations at Saggara, 1908-9. 2. Cap.: of Shelby co., Tennessee, U.S.A., on the Mississippi, 15 m. from S.V. corner of the state. It is a port of butter and of the state. It is a port of entry, and the most important town on the river between St. Louis and Now Orleans. It has many fine bulldings, and is a great cotton market. Other products are lumber, oil, grain, groceries, confectionary, machinery, and shoes. An iron railway bridge (completed 1892),

spans the river. Pop. (1910) 131,105.
Memramcook, a post vil. of Westmorland co., Now Brunswick, Canada, 15 m. S.S.E. of Moncton, on Memraia-cook R. There are saw and grist mills,

and oil ladustries. Pop. 1000. Mena, Juan de (c. 1411-56), a Spanish poet, born at Cordova, was Latin secretary and historiographer to his patron, Juan II. of Castile. joined the Italianate school of Santillana, and Dante's influence is ovident in the ideas though not in the form of his poems. His chief work. El Laberinto, or Las Trezientas, a di-dactic d'escry, fir la peare la 1496. (See Toublas Dellock et 1901). Nuncz 15.22, and sameling 1801, product ks. See V. F. Pickuer. History

Menabrea, Luigi Frederico, Marquis following certain principles and down in Michaels (q.v.). The power of M. de Valdora (1809-96), an Italian varles greatly among individuals general and statesman, professor of Some excel in their power of M. a "ltary neadeny whole on Pascal but generally i" in. He underdons for King

and fought in

mier (1867-69), Affairs (1869). ambasador to

London (1876), and in 1882 replaced, Cialdini at the Paris Embassy, retir-

Menado, a tn. in the island of Celebes, Dutch E. Indies, is a free port, with a large trade to Batavia voin of real carnestness at times, are and China, and one of the most the qualities most apparent in them. beautiful towns of the Dutch E. Consult Melneke's Francenta Comi-

Indies. Pop. 9000.

Ménage, Gilles (1613-92), a French scholar and writer, born at Angers. In 1632 he was called to the bar, but he abandoned the law for the ohurch on account of his health, and spent much time in literary pursuits. For some time he lived in the household of Cardinal de Retz, but soon quarrained with his natron, and founded

la Langue Française, L... ctymologique, etc. See Life by Baret, 1859.

Menaggio, a vil. of Lombar Italy, 16 m. N.E. of Como, on W. shoro of the Lake of that name. Pop. 1200.

Menai Bridge, a tn. lu Anglesea, N. Wales, on Menai Stralt. 2 m. S.W. of

Bangor. Pop. (1911) 2000. Menai Strait, a channel separating Anglesea from Carnaryonshire, Wales. Its maximum length is 13 m., and breadth 2 m., and It is famous for the suspension and tubular bridges for the suspension and tubular pringss crossing it. The former, constructed by Telford (1819-25), is 1710 ft. long. The latter, constructed by Robert Stephenson in 1850, is 1880 ft. long, and is known as the Britannia Bridge.

menaldumadeel, a th. of Friesland prov., Netherlands, 65 m. N.E. of Amsterdam. Pop. 10,205.
Menam, a riv. of Siam, rising in the Sham Mts., near the Burmeso frontler, and flowing mainly in a southerly direction for a course of about 900 m., finally falling into the Gulf of Siam. It is navigable for Gulf of Siam. It is navigable for small boats to Chieng-Mai, 75 m. above Mutka, and for river steamers to Paknam, but its mouth is ob-structed by sandbanks. Its chief Its chief

structed by sandbanks. Its energy tributary is the Taching.
Menander (b. 342 B.C.), the most celebrated Greek poet of the New Comedy, born at Athens. His uncle was the comic poet Alexis; he had Theophrastus for his teacher, and Epicurns for a friend. Menandor was a handsome light-hearted, and was a handsome, light-hearted, and elegant Greek, somewhat luxurious, but not impure in his manners. He was drowned while swimming in the

we possess mere fragments of them. We knowsomething of their character, however, from the imitations of them hy Terenee. Pleasaut and refined wit. elcar, sententious reflection, and a vein of real carnestness at times, are corum Græcorum (Berlin, 1841).

Menander, Arrius, a Roman jurist of the 2nd century A.D., flourished under Severus and his son Caracalla (193-217). The Digest contains six excerpts from M.'s work, Militaria, and Æm. Maeor quotes M. Sec Ulpian, Libri ad

Edictum.

Ménant, Joachim (1820-99),French magistrate and assyrlologist, vice-president of the Rouen civil tribunal (1878); born at Cherbourg. His studies on the cunciform inscriptions are renowned, and with Oppert he introduced the study of assyrlology into France, delivering lectures at the Sorbonno (1869). His works Include: Recueil d'alphabets des écri-

s Assyrian text. books and grammars.

Menasha, a banking city of Winnebago co., Wisconsin, U.S.A., on Winnebago Lake, 14 m. N.N.E. of Oshkosh. There is trade in woollens, paper, lumber, blinds, machiners, etc. Pop. (1910) 6081.

Menasseh, Ben Joseph Ben Israel,

see Manasseh ben Israel.

Mencius (Latinised form of Mäng-tsze, or Meng-tseu) (e. 372 - e. 239 B.C.), a Chinese sage, born in Shantung, ranking next to Confucius as a moral teacher, author of one of the 'Four Books,' which constitute the Chinese Serlptures. He was brought up by his mother, who is venerated in China as the pattern of all mothers. When as the pattern of all mothers. When about forty, he travelled with his disciples to the various princely courts then existing in China, preaching and teaching. His dialogues and exhortations concerning practical conduct, both public and private, were published by his disciples as the Rook of Manager Control Book of Meng-tsen. See Julien's Latiu trans., 1831-29; Collie (English), 1825; Legge, Chinese Classics, ii. 1862, 1875; Faber's Mind of Mencius, 1882; Giles, Hist. of Chinese Lit., 1901.

Mende, cap. of dept. of Lozere, France, 63 m. N.W. of Nimes. Has

Mendel and Mendelism, the biological theory of heredity, first propounded by Gregor Mendel in 1868, but unappreciated or overlooked till liarbour of the Pireus. M. wrote the year 1900, when Professor do more than one hundred comedies, Vries, of Amsterdam, called attenwhich were in high repute among his tion to it. In 1902, Professor William countrymen, at least after death; but Bateson, of Cambridge, translated Mendel's monograph into English. Its cultivation, and numerous experiscientific possibilities were at once scientific possibilities were at once ments on other crops with similar objects are in progress.

Mendel's work been carried on with such such thoroughness and with such such thoroughness and with such success as in Great Britain. Mendel was proposed at St. Petersburg, and in 1822, of peasant farmers. He took a university degree at Vienna, and after joining the Augustlinan order, between the Augustlinan order, between the Mendel's M after joining the Augustlnian order, he moved to the monastery at Brünn, near Vienna, where ultimately he became abbot and where he made those observations on which his theories were based. He died in 1834, aged sixty-two, without the satisfaction of the slightest appreclation of his immensely valuable contribution to the science of heredity. Mondel taught natural science in the Mendel taught natural science in the monastery school, and was evidently well informed in many branches of contemporary biology. In his little garden he spent much time cultivatlng the edible and the sweet pea, and kept exact records of various features of about 10,000 plants which he had The possibility grew upon grown. The possibility grew upon him that there must be some natural law of inherltance. He found that where the parents showed a marked difference in special characters, for example, tallness and dwarfness, the hybrid off pring in the first genera-tion was always tail. This prepotency, as Darwin and others had called it, he termed a Dominant characteristic and the other Recessive. In the next generation, produced either by self-tertilisation or by breeding hybrid with hybrid, he found that a form resulted in which the dominant characteristic occurred pure, whilo there was also one in which the re-cessive observed or was pure. cessivo character was pure. These two occurred approximately as two in four, the other two, though ex-hibiting the dominant character, having the recessive one latent, as cvidently was the case with the first filial generation. That is to say, breeders have only to ascertain which characters, that they wish to preserve, are dominant and which recessive, to be ablo to fix them permanently. Naturally, the breeding operations are hardly ever so simple, as other characters may assert them-selves and may have to ho bred out. But where formerly they were com-pelled to work almost in the dark, Mendel's law gives them at any rate the value of the law will be such as to rank it among the greatest of liverke (1843-45), Brasch's cd. (1880); guidance, Professor Biffen at Car bridge has been able to produce rust-resisting wheat with a yieu above that of wheats in general I:

chemical philosophy and physical chemistry were especially valuable. M. discovered and enunciated the Periodic Law of the atomic weights, which was partly discovered by others hut brought to its highest perfection by him. (See ATOMIC THEORY). He mado a careful study of the chemical properties of petroleum in the mines of Pennsylvania and Caucasia. 1893 he became director of the Bureau of Weights. His chief werk is *The Principles of Chemistry*, 1865-70 (English trans, 1892), See Tilden, 'Mendelseff Memorial Lecture,' in Journ. Chem. Sec., 95.

Mendelsschn, Moses (1729-86), a German philanthropist and eclectic phllosopher of Jewish descent, grandfather of the musician, was born at Dessau on the Elbe. He endured great poverty in early life, and was largely self-educated. In 1750 he entered the sorvice of I. Bernhard, a wealthy silk merchant, becoming his bookkeeper and finally his pariner. In 1754 he was introduced to Lessing, whose intimate friend he becaue, collaborating with him in Pene ein Afelaphysiker (1755). Lessing published M.'s Philosophische Gespräche anonymously (1755), and made M. the here of his Nathan. From about 1767 M. turned his attention to the moral and political elevation of his tather of the musician, was born at moral and political clevation of his race, becoming the foremost champion of Jewish emanelpation in the 18th century. He made a German translation of the Pentateuch and other parts of tho Bible (1783), pub-lished a German version of Manassch ben Israel's Vindeiæ judæorum, and wroto Jerusalem (1783, Eng. trans., 1838, 1852), a plen for freedom of conselence and a demand for the total separation of Church and state. Other works were: Ueber die Evidenz in den Melaphysischen Wissenschaften, 1764; Phädon, 1767 (Eng. trass. 1789); Morgenstunden, in refutation of Pantheism and Spinozism and defence of Lessing 1785-28 See

1886. that enjoyed the advantages of very considerable wealth, culture, and social connection. brilliant He benefited by the tuition and advice of Berger, Zelter, Weher, Cherubini, and Moscholes, and by the time he was twenty had already produced his famous octet, three piano quartets. two sonatas, two symphonies, and the Midsummer Night's Dream overture, besides a host of songs, an opera, and many snort pieces. The next few years were passed in visiting London, Munich, Vienna, and Rome, and in incidental tours in Scotland, Italy, and Switzerland (1823-31); he met with an eager welcomo everywhere, and achieved a wide fame as pianist, composer, and conductor. In 1835, he became con-ductor of the celebrated Leipzig ductor of the edicitated Leipzig Gewandhaus orchestra, and two years later married Cécilo Jean-renaud at Frankfort. The same year saw the production of his 42nd Psalm, and the next year his splondid violin concerto was written, and Lobycsang in 1840. He had already conducted several of the Cologno and Düsseldorf festivals, and on his English tour in 1846, he produced his *Elijah*, still one of the world's favourite oratorios, at Birmlngham. M.'s position in musical history is not so unquestioned as it was, but, even if it be conceded that he is often sentimental, shallow, insincerc, it must be recognised that he was a artist with highly accomplished lofty ideals, and that he had an immense influence on his age. His music, if not always great, is invariably charming, and much adverse criticism is attributable to the fact that his worst works (e.g. songs and piano solos) are best known, whilst his finest efforts (e.g. chamher-music) are neglected. See Lives by E. Wolff (1906) and Moscheles (Eng. trans., 1873), and Letters (2 vols. Eng. trans.), 1862.

Menden, a tn. of Westphalia, Prussia, 16 m. E.S.E. of Dortmund.

1868; Honsel, Die Familie Mendel- it (1861). His poems include; ssohn (Eng. trans.), 1881; Ritter, Mendelssohn und Lessing (2nd ed.), 1892; Hespérus, 1872; La Grive des 1886.

Mendelssohn-Bartholdy, Jakoh Ludwig Félix (1809-47), born in Hamburg, grandson of Moses M., the philosopher. His youth was spent in the refined surroundings of a family 1886; L'Art au théâtre, 1896-1900; that enjoyed the advantages of very considerable wealth. culture. and 1867 & 1903.

1867 à 1900, 1903.
With an efficient poor-law system, it is possible that M. would almost die out, if its undoubteded decrease within comparatively living memory is any criterion. On the other hand, it seems that there must always be a certain roving substratum of society who, from congenital inertia, inepitude, or physical or moral mis-fortune, seem forced to throw themselves on the charity of others, and who from a not incomprehensible trait common to most natures, prefer to beg rather than to avail themselves of the orthodox channels of public relief. Begging per se is no more illegal than betting; what the law punishes is not so much begging as the habit of M., or hegging in a certain way, or in a public place. The net result to a beggar is, however, the same, for it is a trite saying that beggars cannot be choosers, and they can no moro choose their vantage ground than they can anything else. In classical times they would seem. by the irony of fate, almost to have formed a legally recognised class of persons enjoying, as it were, a storeo-typed place in the social system. Many Latin writers e.g. record the daily congregations of beggars in the porches of the houses of the wealthy, and give to the modern mind the impression that the larger the number the greater the credit to the particular plutocrat favoured with the attontions of these strange 'clients.' Juvenal, too, in Salires' v. and v., speaks of the crowds of mendicants who, without interfer-once by the law, habitually took their stand on bridges, or frequented the road leading to Aricla or other suhurban arteries Invariably bear-ing with them their tegetes or sleeping mats. Happily, in spite of pathetic quoues on the Thames Emhankment, Prussia, 16 m. E.S.E. of Dortmund. bo said to be characterised by any The chief manufs, are articles of tin and sheet-brass. Pop. 11,283.

Mendès, Catulle (1841-1909), a French littérateur and poet, horn at Bordeaux, was one of the group of 'The all-sweeping besomof societarian 'Parnassiaus.' He founded La Revue Fandaisiste (ahout 1859), bis Roman d'une nuit (for which ho was fined and imprisoned) appearing in mendicity from the metropolis. the present-day civilisation cannot

fast posting out of the purlicus of this eleventh persecution. Unlike Charles Lamb, in his literary couceit, the law looks with no approval on fluttering and picturesque rags, uor tolerates M. merely because the solioitations or puggara ... rates uninvited in the levy, ungrudged in the assessment. Under the Vagrancy Act, 1824, the law punishes, as a regue and vagabond, any one who: (1) Habitually goes about as a collector of alms, or (2) endeavours, by fraudulent pretences, to procure charitable contributions. Obtaining money by sending a lying begging letter is punishable under the Larceny Act, 1861. Standing in public streets in order to beg alms is also punishable under the Vaney Act. See also Malingering.

Mendicant Orders (Lat. mendico, bcg), certain religious associations of friars that sprang up in the Roman Catholic Church in the carly 13th ecntury, the Dominicans and Franciscans being some of the most noted. They practised the strictest self-denial and self-humillation, owned no land or personal wealth, and subsisted mainly upon alms. Particulars about the M. O. will be found in the article on Monasticism and under the various orders. See Cuthbert in The Friars and how they came to England, 1903; Gebhard, Italie mystique, 1899. Cf. Augustinians, Capuchins, Carme-LITES, DOMINICANS, FRANCISCANS,

FRIAR.

Mendip Hills, a range in Somersetshire, England, extending from near Wells and Shepton Mallet towards the Bristol Channel, in the direction of Weston-super-Mare, for a distance of about 18 m. The highest point is Blackdown, 1067 ft. The hills are mainly composed of carhoniferous limestone, with eruptive rocks at intervals. Zinc ore is mined.

Mendeza: 1. A province of W. Argentina, covering an area of 56,502 sq. m. The Andes form its western boundary, and the Cordillera chain covers a good part of the territory. Minerals abound, but only copper and silver are extracted. chief source of wealth is agriculture, the principal products consisting of wheat, malze, wine, tobacco, and vegetables. Pop. 225,246. 2. A city of Argentina and cap. of above prev., 632 m. W.N.W. of Buenos Ayres, with an elevation of 2320 ft. In 1861 all its principal buildings were destroyed by an cartiquake. Now sumed his journey and arrived at most of the dwellings are only one Sparta on the very day on which story high. The climate is het and Orestes was holding the funeral feast dry. The chief exports are raisins and over Ægisthus and Clytcunestra. He

Scrips, wallets, bags, staves, dogs, wine. In 1910 a tunnel through the and crntches, the whole mendicant Andes was completed, and M. is now traternity, with all their baggage, are the centre of a trans-continental the centre of a trans-continental route from Bucnos Ayres to Val-paraiso. Pop. 43,000. Mendoza, Daniel (c. 1764-1836), a Jewish prize-fighter and champiou of

England (1792), born and died in Loudon. He twice defcated Ilumphrics in contests, and was considered one of the most scientific pugilists of his time.

Mendoza, Diego Hurtado, see Hur-

TADO DE MENDOZA, DIEGO.

Mendoza, Inigo Lopez de, see San-TILLANA, INIGO LOPEZ DE MENDOZA,

Marquis de. Mendoza, Pedro Gonzalez de (1428-95), son of Inigo Lopez, surnamed Grand Cardinal of Spain. He attained eminence under Henry IV. of Castile, by whose influence he was made a cardinal; and subsequently exercised equal influence over Isabella, whose right to the succession he esponsed. He was successively Bishop of Calaborra and Siguenza (1473), chancellor of Castile and Leon, Archbishop of Seville and Toledo (1481), and was sometimes called the third king of Spain. His influence was exerted in favour of the Jews, and of the projects of Columbus. Ho took a vigorous part in the prosecution of the wars against the Moors. The college of Saint Croix was founded by him. Ho died at Guadalajara. On his deathbed he named as his successor Cardinal Ximenez. Consult Prescott's History of Ferdinand and Isabella,

Menedemus, a Greek philosopher, of Eretria, which gave the name Eretrian to his school. He was first a tent-maker, then a soldier. He met with Plato and gave up the army. About 277 B.C. we find him in Antigonus in Asia where he starved

himself to death.

Menelaus, in Greek mythology, was the son of Atreus and younger brother of Agamemnon. He was King of Lacedemon and husband of Helen, of whom Paris robbed him, together with his treasures. He organised nn expedition for her recovery, and with Agamemnon was one of the heroes of the wooden herse. On his voyage home he was shipwreeked off Cape Malea, and after eight years spent among the people of the East, finally lauded at Phares. Here the god Proteus revenied to him the reason of his de-tention, and prophesied that as husband of the daughter of Zeus he would enter the Elysian plains allve. Unvlug sacrificed to the gods, he resumed his journey and arrived at Sparta on the very day on which

spent the rest of his life quietly with Helen, by whom he was the father of Hermione and Megapenthes, the former of whom married Neoptole-

mus, son of Achilles.

Menelik II. (b. 1842), Emperor of Abyssiala, was the son of Haeli Melicoth, King of Shoa. In 1856 he was obliged to wed Batana, the daughter of Theodosius, the reigning emperor, and ten years later he became King of Shoa. On the assassination of Theodosius (1889), he declared himself emperor. Having in-flicted an ignominious defeat on the Italians, he was able to replace the objectionable treaty of Uchali (1889) by the peace of Addis-Abeba (1896). whereby his independence was fully recognised. Under his intelligent direction Abyssinia is rapidly assimilating the benefits of a western civilisation.

Menemen, a tn. of Asia Minor on the Gediz-chai, 14 m. N. by W. of Smyrna. Pop. 10,000, half of which

Moham.

Menendez Pelayo, Marcelino (b. 1856), a Spanish writer and critic. born at Santander; studied at Madrid, and after a brilliant academic careor became professor in 1878. His orthodoxy and ultramontanism are revealed in his popular essays La Ciencia española (1878) and in his Historia de los heterodoxos españoles (1880-86), whilst his Calderon y su teatro (1881) and his Historia de las ideas esteticas en España (1881-91) are true monuments of literary criticism. Ho has issued the standard edition of Lopo do Vega (1890-1903).

Menes (Marys), according to the traditions of the Egyptians, was the first king of Egypt. The name, significance nitying conductor, has been tound on inscriptions, but no contemporary monuments of bim arc known. Herodotus ascribes to him the building of Memphis, and Diodorus says that he introduced the worship of the gods and the practice of sacrifices into Egypt.

Mengo, a native cap. of Uganda. Whereby he was able to manufacture Central Africa, on the N. shore of checolate on an immense scale. He published several treatises on coonolilli is situated the residence of the king ('Kabaka') of Uganda, and his ministers; also the Par' in the St. Lawrence, from which Uganda 1 served the Republican cause in parliament (1876-81). Antiministers; also the Par' in the St. Lawrence, from which Uganda 1 served to the same captures of the published several treatises on connocation of the published several treatises. And served the Republican cause in parliament (1876-81). Antiministers; also the published several treatises on connocation of the published several treatises. And the published several treatises on connocation of the published several treatises. And the published several treatises on connocation of the published several treatises. And the published several treatises on connocation of the published several treatises. And the published several treatises on connocation of the published several treatises. And the published several treatises on connocation of the published several treatises on connocation of the published several treatises. And the published several treatises on connocation of the published several treatises on connocation of the published several treatises. And the published several treatises on connocation of the published several treatises. And the published several treatises on connocation of the published several treatises on connocation of the published several treatises. erned, subject to tho

Mengs, Anton Rafat.

Mengs, An appointed court painter.

allowed to return to Romo to continuo his studies. He soon canada great reputation by his original compositions, among them a 'Holy Family,' the Virgin of which was painted from a beautiful peasant girl her he afterwards married. His tinuo his studies. He soon earned a

'Apollo and the Muses,' in the Villa Albani, Roue, however, made him more celebrated. He did various paintings for Charles III. of Spain. dcoorating the royal palaces of Spain, and the 'Apotheosis of Trajan,' at

Madrid, is considered his chef d'æwre. Mengisze in the S.E. of Yunnan, China. opened to trade with Tongking in 1886. Tin, opium, and tea are

exported.

Tin, opium, and tca are Pop. 20,000. len, Hardhead, or Moss-Menhaden, banker (Clupea menhaden), an important fish allied to the shads, common on the Atlantic coast of N. America. It is employed as a bait, but is chiefly valuable for its rich oil and for the manurial value of the

residue. Menhirs are standing stones, found alone or in groups in the United Kingdom and in Brittany. It is conjectured that they were mainly erected for commemorative purposes. The Hawk-stane in St. Hadoes, Porthshire, bears witness to a defeat of the Shire, bears writers to a detect of the Danes at Luncardy; a collection of 450 stones in Caithness probably marks the place of graves belonging to the bronze age; and many pre-historio monoliths were probably landmarks, boundary lines, or places of meeting for hunters. At Lor-mariaquer, Morbiban, are the four fragments of the largest M. in the world; when erect it stood 67 ft. high. Some M. bear inscriptions or spirals and cup-and-ring markings, etc. The M. of Medreac is rectangular; that of Doi (called the 'pierre de champarc known. Dolent') is eylindrical, and various other shapes occur.

Ménier, Emile Justin (1826-81), a French manufacturer and political economist, born in Paris, gave up the Monfi, a tn. of Sicily, in the prov. of Girgenti, 32 m. E.S.E. of Marsala. Pop. 11,000.

as a game preserve.

re ho was Meningitis, inflammation of the Ho was membranes of the brain or spinal cord.

Tubercular ccrebral meningitis, or acute hydrocephalus, is always associated with a tuberculous history. It usually attacks children under ten years of age, but is occasionally found to affect adults. The early symptoms are very indefinite. There is disturbed appetite and digestion; the patient is restless, hut easily fatigued. Severe headaches and vomiting mark the more definite stage of the disease, and the patient gradually passes from an excitable state to a depressed condition. Light, which in the first stage is painful, becomes tolerable again. Squinting almost invariably appears in the eyes, and there may be drooping of the eyelid or even hilndness. The pulse becomes slow, the patient sinks into a drowsy and almost insensible condition. Towards the end, there may be a recurrence of the more excitable state, and the cluid may appear to be improving. The disease is almost invariably fatal.

Cerebro-spinal fever, or epidemic cerebro-spinalmeningilisis also known as 'spotted fever.' It is an infectious disease, produced hy diplococcus intracellularis, and since 1905 has caused oonsiderablo mortality in Europe and America. Its onset is sudden; the patient has severe headaohe, and is seized with rigors and vomiting. Muscular spasms ensue; there is general hyperasticsia and foverish conditions. Ahout the fourth day rashes appear of varying form and colour. The death-rate a few years ago was 70 per cent., but the adoption of Flexner's serum treatment has caused a marked diminution, bringing the mortality down to 20 per cent., or oven lower.

usion of the bony covero the memin and spinal defect in the

skull or vertebral column, the meuinges may protrude, forming a oyst filled with cerebro-spinal fluid.

Menippus, of Gadara, Palestine, flourished in the early 3rd century, n.c. Cynie and satirist, ho undoubtedly exerted a paramount influence on many subsequent writers, yet his books have all perished, and his style may only be gleaned from the Menippean Satires of M. Terentius Varro, avowedly his imitator.

Meniscium, a genus of tropical ferns with beautiful venation. They are grown as sub-aquatics in the stovehouse.

Menispermaceæ, a natural order of climbing shrubs, occurring in tropical Asla and America. The flowers are borne in racemes and are generally directors.

Menispermum, or Moonseed, a genus

or of deciduous flowering shrubs. M. ci-canadense has large shield-shaped It leaves and yellow flowers, and dees en wei on a damp, shady wall.

well on a damp, shady wall.

Mennonites, a Protestant sect, whe date their origin from a congregation, including Grebel, Blaurock, aud Manz, which formed itself in Zurich in 1525. Recognising tho sanctity of human life and of a man's word, thoy refuse to bear arms or to take oaths. They acknowledge only the authority of the Biblo, postpone haptism intilafter a confession of faith, and dislike all forms of church hierarchies. It will be seen, therefore, that their tenets are such as to suggest comparison in certain respects with the Quakers, Baptists, Socinlaus, and Plymouth Brethren. Their principles were adopted and preached by the devout Simons

preserve was he w Anabapt cesses, w

carnago and other horrors in Munster (1534), and it was largely due to his influence that tho sect spread to Germany and Holiand. For many years the M. were the victims of persecution and intolerance, and their strength was also impaired by internal disruptions; in Switzerland, for instance, the Uplanders, desirous of a

from

sover.
an asylum in Southern Russia, where
Catherine II. allowed them to practise their religion undisturhed. Today the sect numbers some 250,000
members, a third of these heing in the
U.S.A. Dutch refugees founded a Mcommunity at Germantown in Pennsylvania as early as 1683, and since
1871 there have been large M. settlements in Kansas and Minnesota.

Menominie (so called from a new almost oxtinet Algonquin tribe of Indians), a city of Miehigan, U.S.A., the seat of Menominee eo., one of the greatest lumber shipping ports in the U.S.A. It is on Green Bay at the mouth of the Menominee R. Pep. (1910) 10,507.

Menominee, The, an Algonquin tribo of Iudians who dweil in an assigned territory near Green Bay, Wisconsin. Except in language, they are not unlike the Ojibwa. Their estimated number is about 1400.

Menomonee, a city, cap. of Duna eo., Wisconsin, U.S.A., situated on the Red Cedar R., 60 m. S.E. of St. Paul, Minnesola. Manufs. Include carriages, motors. brick, and petrol. Tho city has excellent railroad facilities. Pop. (1910) 5036.

Menopome (Menopoma alleghani-

ensis), Mud Dovil, or Hellbendor, quently than once a month; during a voracious four-legged amphibian pregnancy and lactation it stops enfound in some of the rivers of N. America. It is slate-coloured and about 2 ft. long, and the body is short and thick, and the head large, flat and broad, with wide, fleshy lips. The neck has a single gill cleft on either side.

Mensa, one of Lacaille's southern constellations so named by him in 1752 after the Mons Mensæ (Table Mountain) at the Cape of Good Hope. It lies between Dorado and the S. pole, and contains no star of a brighter

magnitude than 5.3. Menshikov, Alexander Danilovitch (1663 or '72?-1729), a Russian statesman and field-marshal, born at Moseow. He began life by selling meatples in the streets of Moseow, and had before the these began to the streets of the streets of Moseow. Lefort to thank for his introduction to Peter the Great, with whom he had thoroughly ingratiated himself by 1699. As a soldier ho distinguished himself at the siege of Azov (1696), and the battles of Kalisch and Poltava (1790), and again in the occupa-tion of Courland and Pomerania and the seizure of Riga and Stettin. a civil administrator he executed reforms with remarkable promptltude and success, and on his death (1725) assumed the reins of government during the brief rule of death (1725) assumed the reins of ache, and general lassitude. The government during the brief rule of various kinds of dysmenorrhæa are Cathorine and the minority of Peter described as (a) ovarian; (b) con-II. Ousted from power by the Dolgorukis, he was banished and died an exilo in Siberia.

Menshikov, Alexander Sergeievich (1789-1869), a Russian general and admiral, was the great grandson of Alexander Danioviten M. He served Alexander in the Napoleonic cam-paigns of 1812-15, and in 1828 cap-tured Anapa from the Turks. Created admiral in 1834, he improved very considerably the standard of effi-ciency in the navy. During the Cri-meau War (1854-56) he commanded the Russian forces at Alma, Inker-

mann, and round Sebastopol.

ot urre

· days,

which issues every twonty-eight days from the uterus of a woman, so long as she is capable of procreation. M. begins at the age of puberty, which among Teutonic races varies from fourteen to sixteen, and is a sign of the change from childhood to womanhood. The flow ceases between the ages of forty-five and fifty-two, this end fifty-two, this e. M.

pregnancy and lactation it stops entirely, and its cessation, therefore, is an early indication of conception. The menstrual process is often accom-The helistrian process is orientate our and panied by disorders, which are ither 'dysmenorrhoga,' menorrhagia,' and 'metrorrhagia.' (1) Amenorrhoga imhern plies absence or deficiency of cata-This may arise from such menia. a physiological cause as pregnancy; from constitutional causes such as anæmia, emotional disturbance, malaria, and other febrile disorders, such diseases as phthisis, or diseases of the stomach, or nervous system; or from local causes such as the absence, malformation, or disease of the ovaries or uterus, or of both. Sur-gery will sometimes remove local causes, whilst anemia and other constitutional eauses may often remedied by better nutrition, healthier surroundings, change of air, or mental occupation. (2) In dysmenorrheea, M. is attended by pain: with some women this is always so, whilst there are others, to whom it brings no appreciable discomfort. The pelvis is the seat of the pain, but it is feit also in the grains the sear of search se in the groins, thighs, and sacrum. Other symptoms are head and baok-

Alexander Danilovitch M. He served and aperients administered a few days before catamenia is expected, may be recommended in certain cases (3) Menorrhagia is flooding, or excessive flow. Frequent causes are sub-involution of the uterus, fibroid tumour, polypus, cancer, and ulceration of the cervix, etc. (4) Metrorna, Inker-rhagia is escape of blood from tho uterus, independent of M.; it is occasional to the uterus, or its

> ounces, straight lines are measured by mechanical means, but the measurement of irregular lines forms a part of the integral calculus termed rectification. The areas of plane figures, such as

ctc., may be square = (side)3,

readth, parallelogram = base x height; trapezium = $\frac{1}{2}h(a+b)$, where a and b are the lengths of the parallel sides, and h the porpendicular distance between them. Various formulæ are true for the triis fre- angle; (1) half the base multiplied by

the height, or $(2) \sqrt{s(s-a)(s-b)(s-c)}$, where s = half the sum of the sides a, b, and c. For quadrilaterals, and the various types of polygons, it is usual to divide them np into triangles, find the nrea of each triangle, and sum up the results. The area of and sum up the results. The alect of the circle= πr^2 , where $\pi = 3.141$, and r=radius. The nrea of a sector of a circle= $\frac{1}{2}r^2\theta$, where θ is the angle subteneed by the are at the centre. That of the ellipse= πab , where α and b are the semi-axes. Various other formulæ for the triangle and polygons are known in terms of trignometrical notation. The areas of the less famillar areas are determined by calculation by means of the integral calculus.

With regard to solids, the volumes and surface areas of the most common are as follows: Volumes.—Prismarca of hase x height. Conc={ area of base x height. Pyramid={ area of base x height. base x height. Cylinder = area of base x height. Sphere = $\frac{1}{2}\pi a^3$, where a= radius of the sphere. Surface areas.— Prism, cono, pyramid, and cylinder= area of ends+area of eldes. The snfface area of the sphere $=4\pi a^2$, where a = radius. Various mechanical rules have been formulated for the areas, e.g. Simpson'e rule. Pappus' theorem expresses the fact that the volume of a solid of revolution is equal to the area of the generating figure multiplied by the circumference of the circle through which its centre of gravity moves, and the surface area of a solid of revolution is equal to the perimeter of the generating figure multiplied by the distance through which the centre of gravity travels. Amongst the mechanical appliances, the planimeter may be mentioned as an instrument for the measurement of the lengths of irregular lines.

IDIOCY, Mental Deficiency, see EDUCATION, TEACHING.

Mentana, a vil. 12 m. N.E. of Romo, Italy, where in 1867 the French and papal forces defeated Garibaldi. Pop. 2000.

Menteith, or Monteith, a joch and dist. of Perthshire, Scotland, in the S.W. of the co. The lake is about 11 m. long, with a breadth of 1 m., and contains three small picturesque islands. The dist. extends from the Teith to the Forth, and formerly was an independent stewartry. The earldom of Monteith is long extinct.

Mentha, a name applied to a genus of lablate plants, otherwise known as the mints; also to the volatile oil contained by the different species. The more important species are Mentha viridis, or spearmint, which Lower Egypt. It stretches is used for culinary purposes, and contains an oil used as an aromatic Rosetta branch. Pop. 970,581. stimulant; M. piperila, or pepper- Menyanthes, Buckbean or Bogbean, mint, used to relieve nausea, flatn- a genus of aquatle plants (order Gen-

lence and pains in the stomach and intestlnes: and M. sylvestris, horse mint, an uncultivated variety, used for the same purposes as spearmint and peppermint.

(C10H1,OH), an alcohol Menthol derivative of menthone, one of the constituents of oil of peppermint. It niso occurs in n freo state in peppermint, and is mainly responsible for the characteristic odour of the plant. M. crystallises in prisms which melt at 143° and boil at 212° C. It is reduced by hydriodic acid to itexa-hydrocymene. The M. of pharmacy is commonly derived from Meatha arrensis purpurescens, a Japanese variety of mint. In this form it usually contains other ingredicats, and is made up as a soft crystalline solid resembling camphor. In fact, it is often known as mint camplior. It volatilises readily on being rubbed on the skin, but has a stimulating effect if evaporation is prevented. It is used as an anodyne in neuralgla and in many irritating affections of

the skin. Mentone, a favourite winter and health resort, 143 m. by rall E.N.E. of Nice, on the Mediterranean shore, the dept. of Alpes Maritimes, ance. A rugged headland divides bay into two portions. There are France. its bay into two portions. There are really two settlements, that of the hotols and visitors, which lugs the water's edge, and the native quarters straggling up the mountain side. The mean annual temperature is 61° F. The vecetation is almost tropical, and millons of lemoas ore

grown each year. Pop. 13,000.

Mentor figures in Greek legend, and especially in Homer, as the sea of Aichmus, the trusted friend of Odysseus and the wise preceptor of Odysseus' son, Telemachus. It was heaville held charge of Odysseus' legend. he who had charge of Odysseus' home whilst the latter was in Ithaca abroad. His name has become syn-onymous with trustworthy comsellor.

Mentz, see Mainz.

Mentzolia, a genus of half-hardy

Mentzolia, a genus of half-hardy annuals or percenaials (order Loasseen) with large white, yellow, or orange flowers. Several species are hardy in sunny borders.

Menuf, a tn. 35 m. N.N.W. of Cairo, situated in the Nilo delta at the junction of two branches in Lower Egypt. It is an important market for agricultural produce. Prop. 22,316.

Pop 22,316. a 'mudirla' or prov., Menufia, a 'mudirla' or pro-607 sq. m. in area, in the Nile delta, Lower Egypt. It stretches from the fork of the main arms along the

Menyanthes, Buckbean or Bogbean,

tianaceæ). with dainty, fringed, white flowers, is a native of Britain.

Menzel, Adolph Friedrich Erdmann Von (1815-1905), a German painter and engraver, born at Breslau. lost both his parents before he was eight, and had later to support his family. Having illustrated Goethe's Kunstlera Erdenwallen and works with pen and ink drawings, he revived the art of wood-engraving, and made a name for himself by his Illustrations of the Geschichte Friedrichs des Grossen, and of the actual works of the same Frederick (1843-1849). He owed his mastery of oils purely to lus own codeavours. 'The Forge,' The Ball Supper,' and 'The Market Place at Verona' are three

of his best pictures.

Menzel, Wolfgang (1798-1873), a
German historian and man of letters, born at Waldenburg, Silesia. He studied at Breslau, Jena, and Bonn, and after teaching in a school at Aarau (Switzerland), settled finally in Stuttgart. A keen controversialist, he wavered in his political views, but was always a staunch upholder of the Christian Church. The following selections from his works gives some idea of his mental worss gives some idea of his mental alertness and versatility: Streckverse (1823), a volume of original and witty poems; Narcissus (1830), a dramatised fairy-tale; historics of Germany (1829), Europe (1853-57), the world (1862-72), and of the German wars of 1866 and 1870; a Literaturblatic and the autobiographical Derivativistical (1876)

graphical Denkwirdigkeilen (1876). Menzies, a tn. in the gold-mining dist. of Western Australia. It lies south of Lako Ballard, and is connected by rail with Malcolm, Albany, and Perth. Pop. 2500.

Menzicsia, a genus of hardy shrubs (order Erleaceæ), natives of North America and Japan, sometimes grown in rock gardens and moist borders. The blooms are more or less globeso.

Menzini, Benedetto (1646-1704), an Italian poet, was born at Florence, and entered the priesthcod, becom-ing professor of cloquence at the archi-gymnasium of Rome. He enjoyed the patronage of Christina, of Sweden, and was in some measure inspired by Francesco Redl. His original verse, which includes twelve pungent satires (1728), some mediocre odes, and a few dainty anacreontics, is more readable to-day than

bis somewhat antiquated essay in criticism entitled Art of Poetry.

Mephistopheles is the evil spirit in the Faust legend, by whom Fautt is persuaded to sign away his soul. Bankrupt. Pawn, and occasionally The Greek word (upposrooking, mean-lng 'a hater of light') is pro-

M. trifoliata, a bog plant | bably a transcript of the name of a Chaldean or at least an Eastern god. who belonged to that dualistic system whereby good and light on the one hand were opposed to evil and darkness on the other. M. receives very different treatment at the hands of Marlowe and Goethe in their versions of the Faust legend. Both, however, identify him with Lucifer, the fallen archangel, with the mediæval devil, and also with tho humorous kobald of German folklore.

Meppel, a tn. in Drente, Holland 17 m. by rall N. by E. of Zwolle. It communicates with the Zuyder Zee rid the Meppeler Diep. Pop. 11,000.

Meppen, a tn. situated at the confluence of the Haase and Ems, 42 m. N.W. of Osnabriick, in Hanover, Prussla. Pop. 5122.

Prussa. Pop. 5122.
Mequinez, see Mekkinez.
Meran, a ta. and health resort,
picturesquely situated at the base
of the Küchelberg, on the Passer
R., 16 m. N.W. of Botzen, in the
Austrian Tyrol. Pop. 11,576.
Mercadante, Saverio (1797-1870),
m. Hellin compager borg challe.

an Italian composer, born at Alta-nura, Italy. He was for some time musical director at Novara Cathe-dral, and became principal of the conservatoiro at Naples (1840). of his many operas the earlier, such as 'L'Apoteosi d'Ercolo' (1819), 'Elisa e Claudio' (1821), 'I Briganti' (1836), and 'La Vestale' (1842), are the more famous,

Mercantile Law. There is no part of the English law which is specifically called M. L. except in text-books, although the phrase is occasionally to be found in the title of a statute, e.g. the Mercantile Law Amendment Act, 1856 (as to which see Limitations, STATUTES OF). The reason for this is that English M. L., built up largely upon the oustoms of merchants, theory forms merely a part of the common law (q,v), and that such codification as can be said to exist has been comparatively recent and confined to special topies, e.g. the Bills of Exchange Act, Merchant Shipping Acts, Sale of Goods Act, etc. For the sources of M. L., its rise and development in England, see under LEX MERCATORIA. Other subjects hearing on M. L. arc, Agency, Sale of Goods, Partnership (q.v.), Negotiable Instruments (q.v.), and Bill of Exchange, Life Assurance, Fire, Marine, and Accident Insurance (see also INSURANC).

M	l e rcantile					18	6				Merc	antile
	Total number and net tonnage of versels, including their repeated voyages, that entered and oleared, with cargoes and in ballast, at parts in the United Kingdom, from and to foreign countries and British possessions, in each of the years 1909, 1910, and 1911. (Vessels are said to be in ballast when they carry (a) only passengers with their luggage, or (b) in the foreign trade, nothing but cabil to rehalf, or (c) in the coasting trade, only material on which no freight is carried for the purpose of making the vessel stable.)			With Cargoes and in Ballast	Tons	1,982,011 1,951,295 1,910,516	64,327,508 64,709,154 67,253,999	66,309,519 66,660,449 69,164,515		1,989,508 1,947,845 1,899,866	64,968,655 65,422,020 67,844,960	66,958,163 67,369,865 69,744,826
	goes an 309, 191 1 trade, rposo of		Toral	With (Vessels	7,300 6,707 6,388	33,990 33,890 34,337	71,290 70,597 70,725		6,898 6,056 6,056	33,497 33,202 33,148	10,395 19,567 39,201
	ed, with car the years 19 1 the fereign for the pu		To	h Cargoes	Tons	1,479,401 1,427,865 1,420,134	38,836,402 40,190,800 40,526,327	40,315,803 41,618,665 41,946,461		$\begin{array}{c} 1,630,216 \\ 1,561,472 \\ 1,519,682 \end{array}$	55,563,789 55,765,476 57,743,632	57,194,005 57,326,948 59,263,314
	d oleare each of or (b) ir carried			With	Vessels	5,621 5,199 5,048	10,603 41,143 40,316	16,224 16,342 16,364		5,602 5,236 4,895	55,303 55,185 55,500	60,905 60,421 60,395
	entered an ssessions, In eir luggage, tr is earned,			With Cargoes and in Ballast	Tons	1,486,476 1,488,028 1,485,539	25,161,383 25,530,801 26,901,500	26,647,859 27,018,829 28,387,039		1,522,981	25,332,871 25,674,389 27,006,391	26,855,852 60,005 27,106,309 60,421 28,636,848 60,305
Ţ	es, that tish pos with the	ENTERED	FOREIGN	With O	Vessels	4,987 4,729 4,607	28,182 27,907 28,591	33,169 32,636 33,198	LRED	4,995	8,329 8,010 8,681	33,324 32,697 33,257
IN TRADE—I	ated voyag ries and Bri passengers on which n	Entr	For	With Cargoes	Tons	1,120,030 1,080,931 1,082,308	10,840,079 11,416,200 11,408,301	11,960,109 12,497,131 12,490,609	CLEARED	1,218,151 1,237,635 1,242,639	19,735,021 19,850,500 20,920,647	20,953,172 33,324 21,088,135 32,697 22,163,286 33,257
FOREIGN	elr tepe n count a) only aterial			With	Vessels	3,958 3,697 3,652	16,020 16,330 16,132	19,978 20,027 19,784		4,066 3,862 3,739	24,332 34,487 25,294	28,398 28,349 29,033
H	inefuding the and to foreig they carry (ade, only m			With Cargoes and in Ballast	Tons	405,535 463,267 424,977	39,166,125 39,178,353 40,352,499	39,661,669 19,978 39,641,620 20,027 40,777,476 119,784		466,527 425,834 359,409	39,635,784 39,747,632 40,748,569	40,102,311 40,173,460 41,107,978
	ersels, 1 from a vyhen sting tr		1SH	With C	Vessels	2,313 1,978 1,781	35,808 35,983 36,746	38,121 37,961 37,527		1,903	35,168 35,192 34,467	7,971 6,870 15,947
	onnage of v ad Kingdom be in ballast in the coas		BRITISH	. Cargoes	Tons	359,371 346,934 337,826	27,996,323 28,774,600 29,115,026	29,121,534 29,121,534 29,455,352		412,065 323,837 277,013	35,828,768 35,914,976 36,822,985	36,240,833 36,238,813 37,100,028
farine.	d net to on Unite said to lo, or (e)			With	Vessels	1,663 1,502 1,396	24,583 24,813 24,184	26,246 26,315 25,580		1,533 1,374 1,156	30,971 30,698 30,206	32,501 32,072 31,362
Mercantile Marine.	mber ar orts in the sels are t or slate					${1909 \atop 1910}$	$\begin{pmatrix} 1909 \\ 1910 \\ 1911 \end{pmatrix}$	{1900 1910 1911		1909	$\begin{cases} 1909 \\ 1910 \\ 1911 \end{cases}$	$\begin{cases} 1900 \\ 1910 \\ 1911 \end{cases}$
Merc	Total nui at pe (Vess chalk vesse			•		Saffing	Steam Vessels	Total		Salling Vessels	Steam Vessela	Total

Number and not counge of ressels, including their repeated voyages, that entered and elemed, with cargoes and in ballast, at ports in the United Kingdom, from and to the principal foreign countries and British possessions, in each of the years 1909, 1916, and 1911. FOREIGN TRADE-IL PRINCIPAL COUNTRIES Number and net tonnage of ressels,

2,187,241 7,931,109 4,075,504 7,2335,183 2,1033,915 4,747,772 1,726,190 7,312,681 2,954,946 2,526,924 2,008,580 2,981,333 499,037 1,730,470 806,278 ,191,172 507,447 10,350,986 69,744,826 2,501,977 Tons 1161 69,204 1550 3,282 48225242 -1,149 2,349 492 312 Vessels ¥99 2,143,992 7,944,568 3,875,551 4,167,065 6,846,614 2,105,473 2,810,266 2,547,933 2,015,686 4,103,159 1,461,311 7,124,017 2,679,380 479,110 ,648,116 748,478 ,067,880 458,161 67,369,865 2,380,304 10,262,801 Tons CLEARED 0161 3,033 6,641 062 477 69,567 205 281 103 662 Vessels 2,198,963 8,308,042 3,595,666 1,302,829 1,130,829 1,492,844 1,492,844 1,451,569 2,374,589 455,707 1,768,859 2,810,723 2,507,015 1,895,378 682,547 ,073,037 415,098 9,735,394 66,958,163 2,192,312 Tons 6061 7,038 2,974 3,511 3,516 5,947 5,947 5,887 5,610 1,946 2,790 689 1,544 973 282 521 679 70,395 Vessels લં 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 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F. 4.8. 1.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 % 6.00 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Spain Italy U.S.A. COUNTRIES Norway Denmark (Australia Total public ilopo Natal Cape of Canada Russla. Swedon pug tries Other

TONNAGE AT PRINCIPAL PORTS

The principal ports in the United Kingdom, as indicated by the number and net tonnage of vessels that arrived and departed with cargoes from and to foreign countries and British possessions in 1911, are in order of tonnage as hereunder:—

Port	 Vessels	Tons
London Liverpool (including Birkenhead) Cardiff Nowcastle, and N. and S. Shields Southampton Glasgow Cork (including Queenstown) Hull Plymouth Swansca Newport Biyth Dover Middlesbrough Sunderland Leith Cith Cithmsby Manchester (exclusive of Runcorn Weymouth Bristol	8,321 8,329 5,9294 2,592 2,1526 4,4203 3,270 1,2552 1,5552 1,5552 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430	11,172,298 10,445,254 8,794,257 8,335,762 5,343,948 4,053,384 3,601,467 3,568,028 2,419,294 2,358,341 2,123,501 2,108,824 1,905,358 1,707,702 1,593,902 1,587,180 1,508,595 1,349,882 1,130,915

VESSELS ON THE REGISTER

Total number and register (net) tonnage of salling and steam vessels (registered under Part I. of the Merchant Shipping Act, 1894) remaining on the registers at ports in the United Kingdom, the Isle of Man, Channel Islands, and other British possessions, on Dec. 31 of each of the years 1909, 1910, and 1911.

	Unite	р Кіхером (i	ncluding	Isle of Man	nd Chan	nel Islands)
		1909		1910		1911
	Vessels	Tons	Vessels	Tons	Vessels	Tons
Sailing Vessels Steam Vessels	9,392 11,797	1,301,000 10,284,818	9,090 12,000	1,112,914 10,442,719	8,830 12,212	980,997 10,717,511
Total .	21,189	11,585,878	21,090	11,555,663	21,072	11,608,503

VESSELS ON THE REGISTER-continued

		BRITISH CO	LONIAL	AND OTHER	Possessio	ons,
		1909		1910		1911
	Vessels	Tons	Vessels	Tons	Vessels	Tons
Sailing Vessels Steam Vessels	12,236 5,373	873,395 888,740	12,291 5,547			873,749 961,241
Total .	17,609	1,762,135	17,838	1,806,325	18,082	1,834,990

				TOTAL		
		1909		1910		1911
	Vessels	Tons	Vessels	Tons	Vessels	Tons
Sailing Vessels Steam Vessels	21,628 17,170	2,174,455 11,173,558	21,381 17,547	1,992,870 11,369,118	21,157 17,997	1,854,746 11,678,752
Total .	38,798	13,348,013	38,928	13,361,988	39,154	13,533,498

PORTS, IN ORDER OF REGISTER TONNAGE OF VESSELS

The number and register (net) tonnago of salling and steam vessels remaining on the registers at the principal ports of registry in the United Kingdom at the end of 1911 is as hereunder, in order of tonnage:—

Port	Vessels	Tons
Liverpool	1,371 1,867 1,469 700 313 310 211 157 721 136 212 203 62	2,644,205 2,089,795 1,885,793 691,049 551,071 448,132 300,095 270,256 230,011 193,446 149,282 133,611 116,777

FISHING BOATS ON THE REGISTER AT THE END OF 1909, 1910, AND 1911	TE	ie ieg	ISTER	AT TH	E END	OF 19	00, 1910	, AND 19	11		I
		Воа	Boats on Register	ster	Boats er ficates dorsed or dul were is	nployed, t of which or for which olicate ecu	Boats employed, the certi- ficates of which were en- dorsed or for which new or duplicate certificates were issued	Men and I boats er cates of etc.	Men and Boys required to work boats employed, the certifi- cates of which were endorsed, etc.	ed to work he certifi- endorsed,	Mercantile
		1909	1910	1161	1909	0161 6061	1911	1903	1910	1161	
Kingdom		24,913 583	24,417	24,002	23,206 527	22,586	22,392 493	102,780 1,561	24,913 24,417 24,002 23,206 22,586 22,392 102,780 100,490 100,196 583 565 543 527 1,501 1,505 1,410	100,106	

						-			
	vork ertifi- orsed,	1911	100,106	101,516	1911.		Total	Net Tons	26,929 887,733
	uired to		2		o, and			elses V	286
=	Men and Boys required to work boats employed, the certifi- cates of which were endorsed, etc.	1910	100,490	101,995	00, 191	1911	Wood	Net	21.301 117 5,625 883,851 142 3,882
	and ats e	1900	780	341	rs 19	1	=	Vessels	117
Y	Men a boat cate etc.	č.	$102,780 \\ 1,561$	104,341	yea			suo	301
, 1910,	certi- ere en- h new ficates	1161	22,392 493	22,885	h of the		Steel	Net Tons	1
i i	d, the ich w which eerti				n eao			vessels	169
a o	Boats employed, the certificates of which were endorsed or for which new or duplicate ecrtificates were issued	1910	22,586	3 23,100	gdom h		le le	Net Tons	0,495
VH TI	Boats ficate dorse or o	1909	23,206 527	24,545 23,733	T bed Kin		Total	Vessels	262 20,477 604 580,495
7.7	iter	1161	24,002	24,545	VESSELS BUILT unched in tho Unite	1910	Wood	Net Tons	3,676
2	Regis	- 0			ars in t	i	2	Vessels	135
GGIST	Boats on Register	1910	3 24,417	6 24,982	VESSI		Steel	Net Tons	16,801
3	E	1909	24,913 583	25,496	lels It		w	Vessels	169
FISHING BOARS ON THE REGISTER AT THE END OF 1909, 1910, AND 1911					tile vess		Total	Net Tons	254 26,600 169 16,801 93,876 570 484,200 469,577,164 135,331
2			• •	•	norear		£	Vessels	254 570 4
202			slands	Total .	ı jo oğu	1909	Wood	Net Tons	5,219 1,986
			nol]	F	uuo		=	Vessels	122
1213			lom . nd Chan		nd net 1		Steel	Net	143 21,381 111 5,219 476 482,304 94 1,986
j			ting an a	- 1	ber 2	-	"	Vessels	143 476
	,		United Kingdom . Isle of Man and Channel Islands		VESSELS BUILT Total number and net tonnnge of mereantile vessels launched in the United Kingdom in each of the years 1909, 1910, and 1911.				or Homo nd Colonies: Sailing Steam

190)			M	erc	ant	ile
Total	Net Tons	26,929 887,733	914,662	11,115	193,134	1,107,790	
	vessels	286	1,076	88 234	322	1.308	essels.
Wood	Net Tons	5,625	9,507	138 469	209	0,11	oslto v
=	Vessels	117	259	16	20	279	diuo
Steel	Net Tons	21.301 883,551	905,155	10,977	192,527	1,097,682	Wood, include composite vessels.
	Vessels	169	817	84 218	303	1,119	Wood
Total	Net Tons	20,477 580,495	600,972	7,773 89,724	97,497	698,469	
Ĭ	Vessels	262	998	86 126	212	1,078 6	f steel
Wood	Net Tons	3,676	7,007	130	245	7,252	ertly o
2	Vessels	135	2287	७ अ	G	237	ii ii
Steel	Net Tons	16,801	638 593,965	7,643 89,609	97,252	591,217	f fron an
	Vessels	169	638	122	203	811	tly o
Total	Net Tons	26,600 484,290	510,890	7,315 102,389	109,704	620,594	n or par
۲	Vessels	254 570	\$24	114	179	1.003	of fro
Wood	Net	5,219 1,986	205,7,205	375	385	7.590	4 bullt
=	Vessels	111	1205	C.L	3	2157	PARAM
Steel	Net Tons	21,381 482,304	503,685	6,940 102,379	169'109,319	613.001	Steel, include vessely hullt of fron or purity of fron and purity of steel
	Vessels	476	019	113	169	788	<u>-</u>
		nics .	·	<u></u>		-	ž

> Total Total

oreigners: Saffing Sterm Total .

VESSELS BUILT AT PRINCIPAL PORTS

Number and not tonnage of Mercantilo Vessels (including those built for foreigners) launehed in the United Kingdom, distinguishing the principal ports, in each of the years 1909, 1910, and 1911.

3.					
		Steam	Tons	84,855 12,965 1,965 1,964 1,964 1,053 130,636 130,636 107,401 107,401 66,411	1,069,752
	1161	0,	Ves'ls	######################################	1,024
		Sailing	Tons	2,635 5,688 1,444 1,541 13,337 100 13,091	38,044
	3	Š	Ves'ls	130 186 186 186	374
		Steam	Tons	50,031 9,554 19,530 45,950 110,959 1119,651 70,267 70,267 70,267 70,218 31,722	670,219
	0161	S	Ves'ls	2224022011412 2224022011412 8244022011412	730
	Ħ,	Sailing	Tons	2,763 6,888 1,303 3,193 8,193 1,45 1,006	28,250
		Sai	Ves'ls	32 732 	348
		Steam	Tons	35,904 6681 621 10,125 25,576 80,484 105,655 110,052 71,635 71,5396 37,192	586,679
	60	Ñ	Ves'ls	8051 001 001 001 001 001 001 001 001 001	684
	1909	Sailing	Tons	2,200 4,432 1,257 1,257 266 12,928 11,927 11,917	33,915
		Š	Ves'ls	52 52 2 2 4 69 69 148	319
		Ports		Hartlopool, East and West Junil London Middlesbrough Stockton Stockton Stockton Tyne Ports Glasgow Port-Glasgow Port-Glasgow Other ports	Total
				Hartlope Hall London Middlest Stocktor Suderlin Tyne Po Glasgow Glasgow Greenoel Port-Gla	

VESSELS AND PERSONS EMPLOYED

the Merchant Shipping Act, 1894, belonging to the United Kingdom, Isle of Man, and Channel Islands, which were Total number and rexister (net) tonnage of vessels registered under Part I, and under both Parts I, and IV. (Fishing) of actually employed during 1911 in the homo trade, in the trade with foreign countries, or in fishing; and the number of nersons employed therein.

				Persons	PERSONS EMPLOYED	
	Vessels	Tons	British (other than Lascars)	Foreign (other than Lascars)	Lascars (British subjects and foreigners)	Total
Saillug Vesseis	3,863 9,548	699,335 10,814,871	18,346 186,719	2,382 28,401	45,452	20,728 260,572
Total	13,411	11,514,206	205,065	30,783	45,452	281,300

passenger vessels, hut not beyond partially smooth water limits, are excluded. The number of such excluded vessels were Note .- Vessels employed on rivers and geing boyond smooth water limits, as defined in the regulations regarding 781 sulling vessels of total tonnage 34,976, and 86 steam vessels of 3809 total tonnage. Under 'Lascars' are included Aslatics and Eust Africans, whether British subjects or foreigners, employed on vessels trading between India and this country or entirely in Asiatic or Australian waters, and serving under agreements which terminate in Asia.

TONNAGE OF PRINCIPAL MERCHANT NAVIES (BRITISH AND FOREIGN) FROM 1906-1910 (INCLUDING BOTH SAILING AND STEAM VESSELS), SO FAR AS AVAILABLE

	goor	796x	1908	1909	rgro
United Kingdom Canada Nowfoundland Australia New Zealad British India Othor British possessions	11,167,332 661,196 135,785 122,785 122,760 109,782 226,497	11,485,090 699,752 142,228 376,885 132,596 110,193 236,602	11,541,394 703,390 147,186 386,031 151,709 106,592 227,052	11,585,878 717,964 149,055 404,647 150,840 109,396 230,233	11,556,663 756,929 146,551 413,381 151,138 107,115 237,211
,	12,791,381	13,183,355	13,263,354	13,348,013	13,362,988
Russia (25 tons and upwards) Norway (4 tons and upwards) German Empire (17 tons and upwards) France (2 tons and upwards) Italy (2 tons and upwards) United States— Registered for Oversca (Foreign Trado) Enrolled and Licensed Japan (including Junks)	678,065 1,547,884 2,602,093 1,400,542 1,000,797 939,486 5,735,483 1,392,798 (gross formage)	700,915 1,563,964 2,790,435 1,402,647 995,260 871,146 6,067,648 1,481,206 (gross tonnago)	700,959 1,581,46 2,585,449 1,452,495 1,020,063 940,068 6,425,377 1,514,921 (gross tonnago)	720,437 1,479,634 1,441,336 1,071,103 887,505 6,501,260	723,562 1,521,727 2,903,570 1,451,648 791,825 6,716,537 1,646,644

For further particulars of statistics relating to Mercantilo Marine, see the Annual Statement of the Navigation and Shipping of the United Kingdom laid before parliament. gold and silver it contained, and in-ferentially, of placing artificial re-straints on commerce to prevent money (q.v. and currency) from going out of the country. It is mainly of historical interest so far as England is concerned, though the agitation in recent years of the Tariff Reform Party threatens a partial reversion to what most English economists consider a fundamental fallacy. Towards the end of the 18th century, when the policy obtained in England, heavy duties were put on the importation of French wines and silks, and other commodities, and generally importation was discouraged, while everything was done by bounties and otherwisc to foster exports. Adam Smith in his great classic gave the deathblow to the M. S., as it was officially expounded in Mun's book, England's Treasure in Foreign Trade, the title of which at that time had become a fundamental maxim in the political (see Book iv. of the Wealth of Nations). He shows how deeply rooted was this old fetich of Euglish statesmen, by reference to the theory of its then foremost philosopher, Locke, that the great object of a nation's political economy ought to be the multiplica-tion of the precious metals as 'the most solid and substantial part of its movable wealth.' From Adam Smith we learn that there were some six principal means by which the M. S. proposed to increase the aggregate amount of gold and silver in any country by turning the balance of trade in its favour. Two were restraints upon importation and the trade in its favour. Two were restraints upon importation, and they were imposed either by high duties or by absolute prohibition: (1) Restraints upon the importation of such foreign goods for home consumption as could be produced at home, irre-spective of the country of importation. The result of such restraints was to give a monopoly to home producers, and to raiso the prices to the confrom countries specially adapted by goods cheaply. The notorious Naviga-tion Act, primarily simed acceptant situation or otherwise to produce such tion Act, primarily aimed against the Dutch, was an especially gratui-tous barrier to the economical supply of fish from a people who were not only the principal fishers in Europe, but by reason of their proximity could supply England at a low cost of transportation. But even Adam Smith had to concede that the Navigation Act failacles of the system may be appre-was eminently favourable to the do- clated by a consideration of the meanvelopment of English shipping, what-ling and functions of money (see Cun-

Mercantile System, or Commercial ever its effect on foreign commerce. System, the policy of estimating the (2) Restraints upon the importation wealth of a country by the amount of of goods of almost all kinds from those particular countries with which the balance of trado was supposed to be disadvantageous. Adam Smith's iengthy arguments against this re-straint may be summed up in his position that the balance of produce and consumption may be constantly in favour of a nation though the balance of trade (an expression used to denote the supposed loss from foreign trade through the amount of gold and silver exported, as measured by that part of the imports which had to be paid for in gold and silver) be against it, by reason of the fact that though its circulating coin may be fast going out of the country or replaced by paper money, its real wealth, the exchangeable value of the annual produce of its lands and labour, may all the while be increasing in much greater proportion than its debts. Exportation was encouraged (1) by drawbacks (see Customs Duties) in favour of (a) home manufactures subeconomy of all commercial countries ject to dutios on exportation, and (b) foreign dutiable goods imported for immediate re-exportation: (2) by bounties to foster new or developing manufactures, such as were supposed to be especially meritorious. The absurdity of these bounties was never more convincingly expressed than by Mill, who points out that we induced 'foreigners to buy from us rather than from other countries, by a cheapness which we artificially produced, by paying part of the price for them out of our own taxes. . . No shopkeeper, I should think, over made a practice of bribing customers by seliing goods to them at a permanent ioss, making it up to himself from other funds in his possession.' (3) By commercial treaties (q.v.); (4) by the establishment of colonies in distant countries from the supposed vantage of compelling them to buy English commodities in exchange for their own. The only exception to the M. S. were those required by the system itself. The materials and sumers far beyond those of similar instruments of production were the goods imported without restrictions subjects of a converse polley, designed

> export more largely. Again, importa-tion was allowed or favoured whee confined to productions of countries which were supposed to take from Great Britain still more tian it took from them, i.e. from those countries which were supposed to have the balance of trade orainst them. The balanco of trade ogainst them.

RENCY and Money), and from Smith's theorem that if all restrictive duties innest soldiers in Europo, and devoted were discontinued the exports and themselves for a long time to prompersty of any nation tend to an equality (see also IMPORTS and Ex-

PORTS; PROTECTION).

Mercator, Gerhard (wbose real name was Gerhard Kremer) (1512-94), a mathematician, born in Rupelmonder in E. Flanders, but was of German extraotion. He was early fascinated by geography, and after enjoying the patronago of the emperor, Charles V., became in 1559 cosmographer to the Duke of Jülich and Cleves. He ori-He originated the device of projecting the meridians on maps as equidistant parallel lines, and latitudes as parallel straight lines at right angles to the meridians, Sce MAP.

real Mercator, Nieholas (MI1020 name was Ni

(1610-87), a Da

It was he who metical means of determining the area of spaces between the hyperbola and its asymptote, and who availed himself of this discovery to draw up logarithmic tables.

organismic cases.
Mercato Saraceno, a tn. in Emilia,
Italy, on the R. Savie, 20 m. W.S.W.
of Rimini. Pop. less than 8500.
Merced: 1. Cap. of Merced co.,
California, U.S.A., 110 m. S.E. of San
Francisco. Tourists who wish to see tho Yosemite valley start from here. Pop. (1910) 3102. 2. A riv. of Colifornia, U.S.A., a trib. of the San Joaquin R., baying a length of 160 m. It traverses the Yosemite valley, and has two falls, 600 and 350 ft. respectively.

Mercedes: 1. A tn. of Argentine, 61 m. by rall W. of Buenos Ayres. It has steam mills, soap factories, etc. Pop. 10,000. 2. Cap. and health Pop. 10,000. resort of the prov. of Soriano, Uruguay, on the Rio Negro, 20 m. E.S.E. of Fray Bentos. Pop. 9000. Mercenaries (Lat. mercenarius, from

merces, gain) are soldiers who offer their services for money to the army of any country which is willing to employ them. Greece found it necessary to use M. (keliasis) in the necessary to use M. (kellasis) in the 5th century B.C., though for a long time the citizen hoplites remained the flower of the army. The famous Ten Thousand was composed of M., whom eaptains of reputation had collected at the bidding of the younger Cyrus. In Norman times M. were employed by the king, and the bulk of a mediteval army often consisted of professional soldlers who were alld by a sentage tax levied on the pald by a seutage tax levied on the peasautry. In addition to the merpensautry. In addition to the mercenary eavalry, Brabancon pikemen ind Italian crossbowmen were employed as M. The Swiss, by such victories as those of Gransoa, Morat, information in his power as to the

knechts, who fought generally in imperlal armies, were a fine type of M., and contributed more to the modern army in customs, etc., than evon the Swiss. Throughout the 18th century Hessian regiments were employed for temporary purposes by the British government (e.g. the King's German Legion was enrolled in 1794), and Germans, Swiss, and Italians were enrolled during the Crimea. Now, it the British army, not more than one in fifty may be of another unationality savo in the case of Indian regiments, The employment of inercenary soldiers led to such things as the 'right of sack,' etc., and also to such developments as the condotteri (q.v.), and the present state of public

opinion concerning war would pre-eludo any such system. See ARMY, FOREIGN LEGION, and the different countries named, etc. Merchandise Marks. The offences

relating to trade marks specified in the Merchandise Marks Act, 1887, bear a close resemblance to forgery. Counterfeiting trade marks and applying false trade descriptions are the principal offences doult with. The Act makes it a criminal offence. punishable either oa indietment with punishable either of indictinent with imprisonment up to two years with or without hard labour, or a fine, or, summarily, with imprisonment up to four months or a fine not exceeding £20 (six months and £50 respectively in the case of a subsequent conviction), inter alia: (1) To forge a trade mark, (2) falsely to apply to goods any mark so nearly resembling a trado mark as to be calculated to deceive, (3) to make a die for the purpose of forging a trade mark, and

(4) to apply a false trade description

to goods. A trade description means

facture or production; (iii.) tha material of which goods are composed; or (iv.) any patent, privilege, or copy-right. The accused will escape conviction only if he can prove that he acted without intent to defraud. It is also an offence under the Act to have in one's possession for sale any manufactured goods to which any forged trade mark or false trade description is applied, unless the possessor can satisfy the court that

source whence he obtained the goods; such other particulars descriptive of in question. In all cases, the offending goods must be forfeited. No prosecution under the Act is allowed after three years from the commission of the offence or after one year from its discovery.

Merchant Adventurers' Company was founded in 1296 by the Duke of Brabant. In England it did not begin its activities until the relgn of Edward III., and it was not incorporated till 1553. Sebastian Cabot (1476-1557) was governor, and it was under his Moscow via the White Sea and thus opened up n trade route between this country and Russia. But the company traded chiefly with the Netherlands, and under James I. its yearly commerce with the Dutch and Germans amounted to £1,000,000. The Merchant Adventurers became known as the Hamburg Company, when Hamburg beenme their chief port of traffic.

Merchant Shipping. The law on M. S. is mainly to be found in the Merchant Shipping Acts, 1894 and 1906, the first of which is practically exhaustive of the subject (except in so far as mere customary law is conecrned). None but British subjects can own any share in a British ship, and all but the smallest fishing or coastwise trading vessels must be registered under the Act or they will There is

on alien

on alien my other class of property, for oven land in the British Isles may be owned to any extent by foreigners. The main provisions of the Merchant Shipping Act, 1894, as amended or supplemented by the Act of 1906 and other Acts, are as follows:

Part I. Registry—No. 11

Part I. Registry.—No ship will be a British ship unless owned by (a) Natural-born British subjects, (b) naturalised British subjects, (c) corporate bodies subject to British law and having their principal place of business in the British dominions. Persons who are: (1) Both naturalborn British subjects and citizens of n foreign state, or (2) naturalised British subjects will not be qualified to own a British ship until they take the Oath of Allegiance to the king of Great Britain, and, further, unless during ownership they either reside in the dominions or are partners of a firm earrying on business in the dominions. All British ships, except river or coastwise ships not exceeding 15 tons burden, and certain smailer Canadian fishing boats, must be registered at some port in the British registered at sonic port in the British Bombay, the port officer; at any dominions. Before register, a ship's other port in any British possession, touage and build, together with the chief officer of customs, or if

her identity as mny be required by the Board of Trade, must be certified by a surveyor; and her name (which can never be changed without the previous written consent Board of Trade), the name of her port of registry, her official number, and a scale of feet denoting her draught must be conspicuously marked on the parts indicated by the Act. A written declaration of ownership, with a full statement of his qualifications for ownership, must be made and signed by the applicant before he will be entitled to be registered as owner. On completion of the formalities of registry, the of the formalities of registry, the registrar of the particular port at which the ship is registered will grant a certificate of registry. This certificate may be used only for the lawful navigation of the ship, and cannot be taken by any person in the exercise of any lien, mortgage, charge, or other right or interest over the ship, but the meets (at) cover the ship, but the master (q.v.) or any other person entitled to the control of the document for the purpose of navigation must, on pain of a heavy fine, deliver it to any registrar, officer of customs, or other person officially entitled to call for its production. The mode of transfer of a registered ship or share therein, when disposed of to a person qualified to own a British ship, must be by 'bill of spie 'in a prescribed form, containing such a description as will be sufficient to identify the ship to the satisfaction of the registrar, and when duly executed, the bill must be produced to the registrar for endorsement of his record of it in his register book. Transmission of ownership on death, marriage, or bankruptey must always be authentiented in the manner pro-

eccds, after deduction of expenses, to be paid to the person entitled on transmission. A valid transfer may be made to a person not qualified to bo a British owner, but the ship then at once loses her British character, and her certificate of registry must be given up, and if she be kept on tho register subsequent to such transfer she will be subject to for-The following are registrars feiture. for the purpose of the Act of 1891: At any port in the United Kingdon or Islo of Man, the chief oflier of customs; in Guerney and Jersey, the chief ofliers of customs and the governor; in Maltn and Gibraltar, the

governor; at Calcutta, Madras, and Bombay, the port officer; at any

hole, the governor or his deputy da hole. A British ship is bound to carry certain papers, and these generally carried are: (1) The certificate of registry, (2) the agreement with the seamen (see below), (3) the charter-partles and the hills of lading (If a merehautman), (4) the hill of health, (5) invoices containing particulars of (5) invoices containing particulars of cargo, (6) official log (see below). These papers must be shown to any naval commissioned officer, officer of the Board of Trade, chief officer of customs, mercantile marine office superintondent, British consular officer, or registrar-general of scamen British who may require to see them (Stoven's Mercantile Law). It is a felony to forge, or in any way to assist in the forgery or fraudulent alteration of a register hook, ship-huilder's or surveyor's certificate, or certificate of registry, declaration, bili of sale, instrument of mortgage, or certificate of sale or mortgage, and a false do-claration is a misdemeanour which renders the offender liable not only to imprisonment but to the forfeiture of his share in the ship. There are also other provisions in this part of the Act and that of 1906 to safeguard the national character of British shipping national eneractor of British simpling and to protect the British flag against imposition. The assumption of the British flag on board a ship owned whoily or in part hy disqualified persons (savo to avoid capture hy an enemy) invoives forfeiture

Act of 1906 also provides per for not holsting the proper n colours when signalled by a g ment ship on entering a foreig

entering or leaving any British port.

Part II. Masters and seamen.—This

part of the Act regulates the grant of certificates of competency to masters, engineers, and other officers of ships, enables poor law guardians to apprenthee, with their consent, pauper boys of twelve years of ago who are of sufficient health and strength to the sea service, and deals fully with the engagement, discharge, wages, property, health, protection, and discipline of seameu. No one may engage or supply a scamau or apprentice without a licence to do so from the Beard of Trade. The master of every ship (except in the case of ships of less than 80 tons burden) must enter into and sign an agreement with the erew containing these particulars:
(a) The nature and, as far as practicable, the duration of the intended veyage or engagement and the parts

none, the governor or his deputy ad time at which each seaman is to be hoc. A British ship is bound to carry on hoard or begin work; (d) the capacity in which each seaman is to serve; (c) the amount of wages; (f) scale of provisions; and (g) regulations as to conduct on board, including fines or other lawful punishment for misconduct. There are special provisions as to signing in the presence of a superintendent in the case of agreements with erews of foreigu-going ships. Running agreements, i.e. those extending over two or more voyages, may not go beyond the next following June 30 or Dec. 31, or the first arrival of the ship at her destination in the United Kingdom after that date, or the discharge of earge upon that arrival. The master must, at the heginning of every voyage, post up a legible copy of the agreement with the erew in some accessible part of the ship. Agreements with lascars or any uatives of India are also subject to special provisions mainly designed to ensure their return to India. Generally speaking, a scaman must have served four years hefore the mast to be entitled to the rating of A.B. Before paying off or discharging a seaman, the master must deliver either to the seaman or a superintendent a true account of the wages due. Stipulations by a seaman or the beginning of a versure for the beginning of the versure for the beginning of the paying of the page of the p man at the heginning of a voyage for the allotment of any part of his wages during his absence are for the most

or (if upwards of 50 tons hurden) on man has a right to his wages whatever may happen to the ship, and an inallenable right of lien over the ship for their payment, but wages will not accrue during his refusal to work, imprisonment, or illness by his own default. Wages due up to the amount of £50 may be sued for summarily hefore any magistrate whose ceurt is at, or near, the place where the service has terminated. There are also stringent provisions relative to the mode of dealing with the effects of seamen whe may die on board ship. Severe fines may he inflieted on masters inexcusably leaving foreign seamen in distress in the United Kingdom. The Act of 1906 provides for the mode of dealing with wares for the mode of dealing with wages and effects of seamen icft hehind out of the British Islands, and for the repatriation of distressed seamen, and seamen left on land abroad without their consent or through dis-charge consequent on change of of the world, it any, to which the charge consequent on change of engagement or voyage is not to extend; (b) the number and description of the erew, specifying how medicines, medical stores, and antimany are engaged as sailors; (c) the

etc., and the provisions and water for the crews of certain ships (mainly those going through the Suez Canal or round the capes of Good Hope or Horn) are subject to inspection by qualified medical inspectors of ships. The Act of 1906 requires the master to furnish every member of the crew with provisions in accordance with tho scale laid down in the first schedulo to the Act. Masters are required to keep official log books which may be kopt distinct from or united with the ordinary ship's log; but in any case the official log must certain specified entries, contain certain specified entries, mainly relating to illnesses, deaths, wages, and statements of the conduct of the members of the crew. This part of the Act also authorises the formation of local marine boards under the superintendence of the Board of Trade, for carrying into effect such of the provisions of the Act as relate to their powers and duties. Every local marine board must send to the Board of Trade such must send to the Board of Trade such reports and returns as may be required by the Board. The seventh schedule to the Act provides that a local marino board shall consist of: of Trade is also empowered to make (a) Tho mayor or provost, and the stipendiary magistrate of the particular district; (b) four members appointed by the Board of Trade from residents or beinges more at the from residents or business men at the

parsicular port.

Part III. Passenger and emigrant marked ships. — The expression 'emigrant ship includes only ships carrying (a) was to more than fifty steere

or (b) in the case of more than one statute of twelve years or mor the ship's tonnage, or (c) in the case deck) as a universal rule, and the of steamships, one statute adult to 20 tons. The Act of 1906 makes some important amendments to this part of the Act of 1894. A ship may not the subject since 1875 in the main campilities of the convention of the difficulty by the volume are acceptance of freeboards assigned to the convention of the difficulty by the volume are acceptance of freeboards assigned to the convention of the difficulty by the volume are acceptance of freeboards assigned to the convention of the difficulty by the volume are acceptance of freeboards assigned to the convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficulty by the volume are acceptance of freeboards as a not convention of the difficu of the Act of 1894. A ship may not carry passengers, whether cabin or steerage, on more than one deek below the water-line, under a penalty not exceeding £500. The Act of 1894 prehibits shipowhers and masters of 1890, and lays down important propassenger steamers, under pain of fine, from carrying passengers in excess of the number allowed by the passenger steamer's certificate. There are also coplons provisions relating to the coplons provisions relating to the steamers with compasses, hose, and safety appliances; the maintenance of order on passenger steamers; the survey of emigrant ships before proceeding outwards; the supply of provisions and water, and the carrying of that country so desire). But the Act prehibits shipowners and masters of

on board the ship. Such medicines, an adequate medical staff on emigrant ships; the prohibition of the carriage of explosives or other dangerous goods, and the conditions under which cattle may be carried on emi-grant ships; the delivery by the master to the oustoms officer at the port of clearance of a duly signed duplicate of the list of passengers, both cabin and steerage; the forfeiture or release of a ship on payment of extremely heavy penalties for pro-ceeding to sea without the master having obtained a certificate for clearance; forwarding passengers from wrecked or damaged ships; and licences for emigrant runners (er passage brokers' agents), together with the conditions under which such persons may carry on their business.

Part IV. This part deals with fish-

lng boats and trawlers.

Part V. Safety.—This part of the
Act empowers the Board of Trade (strictly the crown by order in council (q.v.) on the advice of the Board of Trade) to make regulations for the prevention of collisions at sea. These regulations as to lights, fog signals, and steering and sailing rules. The Board of Trade is also expressed to rack

also important provisions as to record-ater, and the A short Act Mr. S. Plim port or within 7 miles thereof; and considered by the owners of foreign-going and home trade the deck to be shown on the side of a passenger ships registered at the ship, and every foreign-going Brilish particular port.

inc enforcement of a . (i.e. spaco between by the committee of Lloyd's Regisler. The Merchant Shipping Act of 1894 incorporates the provisions of Plin-soll's Act, and the Load Line Act of 1890, and lays down important promake exceptions in the case of steamships that are not carrying cargo, and by minutes of April 24 and May 30, 1907, the Board excepted these classes of coasting steamers: tugs and salvago steamers, steamers surharbours and approaches veying thereto, hopper barges and dredgers, pilot vessels and passenger steamers holding passenger certificates plying in smooth or partially smooth water limits, or in exoursion limits. By tho Act of 1906 the conditions under which heavy timber goods may be carried as deck cargo are: (a) That they be only carried in covered spaces and in such classes of ships as may be approved by the Board of Trade for the purpose; (b) that they be loaded in accordance with regulations made by the Board with respect to the loading thereof. There are also analogous ing thereof. There are also analogous provisions as to loading 'light wood goods' on deck. Specified precautions must also be taken to prevent main carro from shifting. Scading unseaworthy' ships to sea renders the master, and any person party thereto, liable to a prosecution, the only defence to which is that such unseaworthy state was in the circumstances reasonable and justifiable. Unsafe ships, i.e. ships which by reason of the defective condition of the hull, equipments, or machinery, or by reason of overloading or improper loading are unfit to go to sea without serious danger to life, may be detained by Board of Trado officials for survey, and, if necessary, will not be released until made seaworthy. Costs incidental to survey and deten-tion are recoverable from the owners as salvage.

Part VI. relates to inquiries and investigations as to shipping casualties, and the constitution of courts of survey and naval courts on the high

seas and abroad.

Part VII. empowers a shipowner to land and warehouse cargo where the consignee fails to take delivery, and, by giving notice to the wharfingors, to retain control in the exercise of his lien for freight (see Lien). If the lien is not discharged by pro-duction to the wharfinger of a receipt for the amount of the shipowner's freight and charges, and by payment on deposit by the owner of the goods of the amount claimed, the wharfinger may sell at the end of ninety days and apply the proceeds to the pay-ment of customs and excise duties, expenses of sale, warehouse charges, freight and other shipowner's charges (in that order), the balance (if any) to

of 1906 allows the Board of Trade to | owners and Others) Act, 1900, and the Merchant Shipping Act of 1906, limits the liability of a shipowner, British or foreign, for loss of life or personal injury, or for loss or damage to goods, by reason of the improper navigation of his ship, or through any other causo not due to his actual fault or privity (whother in respect of persons and goods carried on his ship or on another ship with which his ship may have collided), to an aggregate amount not exceeding £15 per ton of the ship's tonnage for loss of life or personal injury, and £8 per ton for loss or damage to vessel's goods and merehandise.

Part IX. deals with the powers and duties of receivers of wreck, the right of the crown (q.v.) to un-claimed wreck, and the removal of calmed wreek, and the removal of wreeks by harbour authorities; regulates the trade of a marine store dealer; and regulates the procedure in salvage, providing for the mode of its apportionment among different

claimants. Part X. deals with the powers of the Board of Trade as to pilotage districts and authorities; cuables pilotage authorities to make laws to exempt masters and any class of ship from being compelled to employ qualified pilots (compulsory pilotage); regulates the licensing of pilots and the recovery of pilotage dues; empowers pilotage authodues; empowers pilotage authorities to grant to masters certificates of competency to act as pilots; empowers the Board of Trade to grant similar certificates to masters and mates so as to exempt them from the obligation to carry compulsory pilots in any home trade passenger ships belonging to the same owner.

Part XI. regulates the powers of lighthouse authoritles throughout tho

British dominions.

Part XII. specifies the sources and application of the Mercantile Marine Fund.

Part XIII. regulates legal proceedings under the Act.

Part XIV. relates to a variety of miscellaneous subjects, inter alia the appointment of surveyors by the Board of Trade; the powers of the Board for onforcing compliance with the Act; and the appointment of inspectors to report on accidents.

Merchants, Statutes of, see Acron Burnell, Statute of.

Merchant Taylors' School public day-school for boys in London. It was founded in 1561 by Sir Thomas White and by the company of Mer-chant Taylors of whom the govern-ing body is still composed. The old be paid to the owner of the goods. school buildings were destroyed by Part VIII. as amended by the hogreat fire (1666) and were recon-Morchant Shipping (Liability of Ship-structed in 1667; the present house was erected in 1873-74 on the site of earth's mean distance); and it takes 87 969 days to revolve round the

Merchtem, a tn. in the prov. of Brabant, Belgium, 8 m. S.E. of Dendermonde. Pop. about 5500. Merchweiler, a tn. in the Rhenish

prov. of Prussia, 33 m. S.S.E. of Treves. Pop. 5317.

Mercia, a central kingdom of England in the days of the Angio-Saxons. The name refers to the march or borderland heyond which dwelt the hostile Welshmen. In the days of its prosperity it extended from the Humber to the Thames, omitting, of course, the Danish East Anglia. There were independent sovereigns of M. at least from 615 to 874, when the Danes overran the east-ern pertion. The greatest kings were Penda (626-655) and Offa (755-794).

Mercié, Marius Jean Antonin (b.1845), French sculptor and painter, Toulouse. born at Ηo became famous when he exhibited his patri-otic work in bronzo entitled 'Gloria He also executed in marble Vietis.' a beautiful statue for the tomh of Mme. Charles Ferry, 'William Tell' (in Lausanue), 'Thiers' (in St. Gor-main-en-Laye), and a group called 'Justice' (in the Hôtel de Ville, Paris)

Mercler, Louis Sebestian (17401814), a French man of letters; cropsed with trenchant satire the corruption of the metropolis in his
Tableau de Paris (1781-88), wrote
upwards of fifty plays, and directed
lis railiery with equal force against
the dramatists of the classical school,
the philosophers, and the scientists.
Mercure de France, established in
1672 as the Mercure Galant, in 1714
it was renamed the M. de F. It was
a most enterprising paper, and hesides

(doxido, and the mercury
after dealer.)

Interpretation of the telescope that its transit across the
Sassendi on November 7, 1631.

Mercury, or Quicksliver (Hp. 200,
including the mobile metals which is
fulld at ordinary temperatures. It
similarly tempera

hest contemporary French poets of vaporised, the Symbolist school. It ceased through a publication in 1799, was revived a where the vapour is condeased, few years later, but finally dis-mines occur in a very few p appeared in 1825.

Mercurius, or Mercury, was the Roman god of commerce, his name being derived from merc, merchandlse. A temple near the circus Maximus was dedicated to him, and his festival was celebrated on May 15 by the mercuriales, who were members of a college regulating the corn trade. Mercury was identified with the Greek Hermes as early as 495 n.c.

Mercury, the planet nearest the M. is commonly used in thermosun, is the smallest of the mnjor meters. It is a fairly good conductor planets, having a diameter of about of heat and electricity. It dissolves 3000 miles, i.e. ith that of the earth. It is three times the bulk of the known as amalgams. These amalmoon; its mean distance from the gams are used for several practical suu is 36,000,000 m. (or if of the purposes, zine amalgam is used to

sun. Owing to lack of distinct surface marking it has never been definitely settled how long M. takes to rotate on its axis. For long it face was thought that it did this in about 24 hours, but the opinion of Schla-parelli, backed by Lowell, is that M. rotates so slowly that the same face is always presented to the sun. orhit of M. is of considerable eccurtricity, so much so that it receives less than half the amount of heat from the sun during its aphellon passage than it does at perihellon, the mean of heat and light being seven times more than that received by the earth. The orbit is also inclined to the plane of the cellptic 7°, and at the maximum distance it is 28° from the sun. This means that the planet is only visible for about two hours before or after sunset. The apparent diameter of M. Is from 5 in. to 13 in., and itshlaes with a greater brilliancy than the star Arcturus, hut because of its closeness to the sun it is rarely seen. M. has been known from the most ancient times, but it was naturally not till the invention of the tele-

During this a free state. the mercury heeemes The vapour is passed through a series of ecoling chambers mines occur in a very few places, chlef amongst them may be mea-tloned Almadan (Spain) and Call--ome fornla. nt remarkab ight ordinary

silvery liquid. At -38 5 it assuraes a solld form, which is crystalline, ductile, malleable, and very soft. It boils at 357°, giving off a colourles vapour. Owing to this large range of temperaturo between the limits of which it assumes the liquid state, M. is commonly used in thermo-

certain metals to form what are known as amalgams. These amal-

eover the zine plates of batteries later published his first volume of owing to the fact that it is very slowly | Poems, with a dedication to his acted upon by dilute sulphuric acid. Tin amalgam is used for the construction of mirrors, whereas gold amalgam is used by dentists for filling teeth. M. forms two independent series of salts—the mercurous and mercuric. Mercuric oxide, a red-dish crystalline powder, is obtained by heating mercury in contact with the air. This oxide is decomposed at a higher temperature into its constituent elements.

The mercurie series of salts are obtained from this exide by dissolving it in the various acids. Chief among these salts is mercuric chloride (corrosive sublimate) prepared by heating together a mixture of mercuric sulphate and common sait. is a violent poison, the best antidote being the white of an egg. It is largely used as an antiscrtic. Mercuric sulphido is obtained by rubbing vigorously together M. and sulphur. When this has been sublimed it assumes a red crystalline form known commercially as the pigment ver-milion. Colomel, or mercurous million. Colomel, or mercurous chloride, is the most important of the mercurous salts. It is generally prepared by heating a mixture of mercurio chloride and M. The mercurous chloride sublimes as a white fibrous cake. It is insoluble in water, and is tasteless. M. is used legely in recipium but receive used largely in medicine, but rarely in the uncombined state. It is generally used in tho form of chlorides or iodides. Mcrcury com-pounds, especially if they are soluble, Mercury comare very poisonous, and even as medicinal preparations should not be persisted in for long periods.

Mercury, Dog's (Mercuriolis perennis), a polsonous weed with a creeping rhizome and an creet unbranched stem bearing rough, hairy leaves and small directions flowers, the male in racemes and the female in spikes.

Mercy, Sisters of, see SISTERHOODS. Mer de Glace, a glacier 16 sq. m. in arca, on the northern face of Mont Blanc near Chamonix, in the Alps, Switzerland.

later published his first volume of Poems, with a dedication to his father-in-law. His first prose work, The Shaving of Shagpat, appeared in 1855, but neither that nor Forina (1857) attracted much attention at the time. The Ordeal of Richard Feveral (1859) was acclaimed by several critics, but it was not a financial success, and M. perforce had to turn to journalism for a living. Evan Harrington (1860) was more remuncrative, and it is certainly one remuncrative, and it is certainly one of the most amusing of his novels. Sandra Belloni (1863) and the sequel Vittoria (1866) did nothing to secure him public recognition; but Rhoda Fleming (1865) was more widely read, though it is a painful, if a beautiful, story. The Adventures of Harry Richmond (1871), which had been serialised in the Corphill Mono-Harry Richmond (1871), which had been serialised in the Cornhill Mogozine, improved his position, and this, with The Egoist (1879) and Diona of the Crossways (1885), are among his best books. Ho wrote many poems, and collected them at various times under tho titles of Modern Love, Poems and Lyries of the Joy of Eorth (1883), Bollads and Poems of Tragic Life (1887), A Reading of Earth (1888), eto. Though generally recognised as the greatest novelist of his day, M. was never widely read. He was the novelist of the man of letters rathor than of the general public. Ho has been well, if unkindly, summed up by Oscar Wilde: 'His style is chaos illumined by flashes of lightning. As a writer he has mastered everything but language.' The obscurity of his style used at one time to be hailed by the intellectuals' as his great merit, but it is now generally accepted that he been serialised in the Cornhill Mogo-

clearly, he had wit in abundance, and a power of understanding and describing women that is at once tho joy and despair of his brother-novelists. His poetry was full of novelists. His poetry was full of true appreciation of nature, and he could write poetry not only in verse but also in prose, as in 'Diversions on a Penny Whistle' in Richard Feverel. Like all great writers, he had full confidence in his powers, and attained easily to heights that few of his contemporaries would have Alps, Switzerland.

Meredith, George (1828-1909), a novelist and poet, was descended from a family that had been for several generations tailors at Portsmouth. M. was educated in his native town, and afterwards at the Moravian School at Neuwied, near Coblenz. In 1844 he came to London, and was articled to a solicitor, but he soon drifted into authorship, and wrote poems which appeared in Household Words and Chambers's proparation a Biography by Prof. Journal. He married Mrs. Nicolls, to the Wrote peacoek, in 1849, and two years

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WARD ROBERT BULWER.
Merendera, a genus of hardy hulbs allied to the genus Colchicum (q.v.).
Merewether, a vil. forming a suburb of Newcastle in Northumberland

co., New South Wales. Pop. 4500.

Merganser (Mergus), a genus of sea ducks characterised by a very Mergus long slender heak. ganser, sometimes called the Goos-ander or Jacksaw, is a handsome The male's piumago British hird. is variegated with black, greenish-black, pink and white. The redblack, pink and white. The red-breasted M. (M. serrator) breeds in the north of Britain; the drake has a crested glossy green head, white neck, red breast, and black upper surface with white margins. australis is a rare species found only in the Auckland Islands.

Mergui, a dist. and seaport of Lower Burma. Forests of teak, etc. cover almost all the 9789 sq. m. of the dist. which lies in the Tenasserim The town is now a pearling station, and exports rice, timber,

rattans, dried fish, etc. Pop. 15,000. Mergui Archipelago, a group of hilly islands off the Tenasscrim coast in the Bay of Bengal. Thonative Selungs barter caoutchouc, edible birds' nests. and beche-de-mer for rice and spirits.

Merheim, a tn. in the Rhenish prov. of Prussia, 4 m. E.N.E. of Cologne.

Pop. 23,631

Merian, Matthew (1621-87), a portrait painter; did not reacunce his own profession when, in 1650, he in-herited his father's book and print business. He painted an equestrian picture of the Emperor Leopold I.

Merida: 1. (ancient Augusta Emerita, the cap. of Lusitania) A tu. 32 m. E. of Badajoz, on the Guadiana, 32 m. E. of Badajoz, on the Guadana, in Badajoz, Spain, with numerous Roman remains. Pop. 10,000. 2. A university elty, 336 m. S.W. by W. of Caracas, and the cap. of Los Andes, Venezuela. Pop. 12,000. 3. The cap. of Yucatan, Mexico, 23 m. S. of its port, Progreso, on the Gulf of Mexico. The chief exports are henequen (sleal fibro). Sucar vitus elegate and hidden. fibre), sugar, rum, eigars, and hides. Founded by the Spaniards in 1542, it has a cathedral and a university. Pop. 62,000.

Meriden, a tn., manufacturing plated ware and cutlery, etc., 18 m. N.N.E. of New Haven, Connecticut, U.S.A. Pop. (1910) 27,265.

Meridian (from Lat meridies, noon)

poles, and also through the zenith (1829) and the Histoire de Don Pedre

Meredith, Owen, see LYTTON, ED- and nadir of any place on that terres-ARD ROBERT BULWER. trial M. Whea the sun passes the M. of Greenwich, it is not only neen at Greenwich, hut also at all places situated on the same half of that M.

Meridian, co. seat of Lauderdale co., Mississippi, U.S.A., 89 m. from Jackson. It is an important cottoa-Jackson. It is an important cottoa-trade and industrial centre. Pop. (1910) 23,285.

Mérignao, a suburh 3 m. W. of Bordcaux, in Gironde, France. Mérimée, Prosper (1803 - 70), a French man of letters, born at Paris, was the son of an artist. He was appointed inspector-general of hİs. torical monuments, and in 1853 a scnator under the empire. His charactor is a fascination to the student of hiography. A casual acquaiatance



PROSPER MÉRIMÉE

would have found it hard to believe that bis outward oynielsm was only a mask for that warmth of feeling and capacity for dec ment, which p: une Inconnue over, have commented on his curious resemblance to the Florentine scholars of the Renaissance: his love

of dwelling on the tragic, grim, and ocry elements in life is emphasised in his powerful sbort stories, La Venus d'Ille, and Lohis, and ia his vivid romance, La Jacquerie; and his tand of Rabelalsian humour is conspicuous in his letters to Panizzi. He recalled the Florentines in the diversity of his interests, a diversity which enabled him to write so valuable an archicoand S. poles. Each terrestrial has a logical essay as Description
Merino, see Sheep.

Merion stee Shear.
Merionethshire, a maritimo co. of
N. Wales, bounded on the W. by
Cardigan Bay. The co. is mountainous, the chief peaks being Arran
Mawddwy (2972 ft.), and Cader Idris
(2949 ft.). The most beautiful valleys
of the Dayry (1972) and the N. Wales, bounded on the W. by The Cyn
Gardigan Bay. The co. is mountain.
Fedora,
ous, the chief peaks being Arran Joan, 1885: The Don, 1885: The Whip
Mawddwy (2972 ft.), and Cader Idrls
(2949 ft.). The most beautiful valleys
are those of the Dovey (Dyfl), and the
Mawddoeh. The R. Dee (Dyfrdwy)
drains Bala Lake (5 m.), the largest
In Wales and flows towards Corvent
Merivale, John Herman (1779-1844),
an Enellsh scholar translation and In Wales, and flows towards Corwen an English scholar, translator, and receiving several tributaries or way, and there are over fifty among the mountains and se waterfalls. Slate is quarried at of Chancery, becoming Commissioner Festiniog, and near Dolgelley, the co. tn., gold is found, while lead, include Orlando in Roncesvalles, 1814; copper, and manganese, have been Foems..., 1838-41. Minor Poems worked worked. Agriculturo does not flourish, except here and there in the valleys; the small hardy Welsh ponies are bred. Woollen stockings and flannels are manufactured. Barmouth, Dolgelley, Harlech, are much visited by tourists. It returns ono member to parliament. The area is 819 sq. m. Pop. (1911) 60,292.

Meristem, generating tissue, that part of a plant where growth is active. It consists of cells of nearly uniform size capable of dividing to form new cells. These enlarge, and after certain modifications form the permanent

tissuc.

Merivale, Charles (1808-93), an Eng-Merivale, Unaries (1805-93), an Eng-lish historian, son of John Herman (d. 1844), born in London, and edu-cated at Harrow, Halleybury, and Cambridge. He rowed in the first inter-university beat-race (1829), and became rector of Lawford, Essex (1848-69); Hulsean lecturer (1861); Boyle lecturer (1864-65); chaplain to the Specker (1863-65); and Dean of the Speaker (1863-69); and Dean of Ely from 1869. Among his works are History of the Roman Empire, 1850-

(1832), and became professor of political economy at Oxford (1837-42). M. was permanent Under-Secretary of State for the colonies, and for India from 1848. His publications include Lectures on Colonisation and Colonies, 1841, and His-lorical Studies, 1865. See Trans-actions of Devonshire Assoc., 1884. Merivale, Herman Charles (1839-1906), an English author and

dramatist, son of Herman (d. 1874), born in London, and educated at Harrow and Oxford. He was called

I. (1848), a literary 'supercherie' like to the bar in 1864, retiring from the la Gucia (1827), and 'nouvelles' like legal profession (1874) through ill-the Corsican tale Colomba (1840).

| Legal profession (1874) through ill-the Corsican tale Colomba (1840). Register (1870-80). His plays include All for H-

The Cyn

educated led to the

Poems . . ., 1838-41; Minor Poems of Schiller, 1844; Reports of Cases in Chancery, 1815-17, 1817-19; and contributed to Bland's Greek Anthology, 1813. See A. W. Merivale, Family 1813. See A. W. Memorials, 1884.

Merka, or Markah, a scaport of Italian Somaliland, E. Africa, 45 m. S.W. of Magadoxo. Pop. (Arab and

Somali) 4000.

d'Aubigné, Merle see Aubigné.

JEAN HENRI MERLE D'.

Merlin, or Falco asalon, a small British falcon found breeding in the N. of England and Scotland. Its nest N. of England and Scotland. Its nest is generally made on the ground, and in it three to five bluish-white eggs, blotched with brown markings, are Adult males are blue-grey on tho head, back and wing coverts; the under parts are rufous; the tail is bluist-grey with dark bands and white tips; the legs are yellow and feathered a third of the way down. The young when first hatched are covered with a soft white down. When fully fledged they resemble the formals whichies a proposition have female, which is a morouniform brown.

Merlin, a wizard who worked many wonders at King Arthur's court. He sprang from the intercourse of a Welsh maiden with a demon, but was saved by baptism from evil, although, throughout life, he retained from his father the power of magic and divina-It was be who revealed to Vortigern, King of Britain, the reason why his tower fell, and it was be who had the care of the infant Arthur and later disclosed to him his royal paren-Tennyson tells of the wisdom of M. in his Idylls of the King, but Geoffrey of Monmouth in his Vita Merlini was the first to throw light on

his shadowy existence.

Merluccius, a genus of Gadidæ, or cod-like fishes with two dorsal and one anal fin. M. rulgaris is the hake, a largo voracious, soft-fleshed fish. Al. gayi occurs in the S. Atlantic.

Mermaids and Mermen (mere, lake;

wboso true home is the sea. They were supposed to be capable of living on land and of entering into social relationships with ordinary mortals, and the typical mermaid is represented as a woman of exceeding beauty down to the waist, the figure ending in a fish's tail and body with scales and fins. Mermaid legends exist in nearly all countries, and have given rise to beautiful tales and poems, such as D'Arras's Chronique de la Princesse Mélusine; Arnold's Forsaken Merman. The connection of these beings with mortals generally brings dinits train. The Phænician and the f

or Hea

sented : Baring Gould, Myths of the Middle Ages; Sébillot, Contes des Marins, 1882; John Gerbrandus a Leydis, Annales ..., 1620; Grimm, Deutsche Mythologic, i., 1811; Folklore Soc. Record, ii.

Mermaid's Purse, the purse-shaped egg case of the skates and dog-fish.

Mermaid Tavern. This tavern, mentioned in Expenses of Sir J. Howard (1464), stood in Cheapside, with side entrances in Friday Street and Bread Street, and was destroyed by the Great Fire of London. Raleigh is the reputed founder of the famous ' Mermaid Club ' (c. 1603. See Gifford's ed. Probably Jonson, of Ben Jonson). Beaumont. Fletcher, Donne, Sliakespeare, were members of this elub, which was noted for its Canary wino and the sparkling wit of its frequenters. See Beaumont's Epistle to Jonson: Fuller's Worthies...;
Athen. (Sept. 16, 1865).

Merodach-Baladan (or Marduk) II. (c. 722-709 B.c.), King of Babylon. Under this powerful prince the Babylonians, alded by the Elamite court, re-as

was of A

desti assassination, his sneeessor, Senna-cherib, drove M. from the Babylonian

throno (705). Scc 2 Kings xx. 6.
Meroë (or Merawe), Isle of, a wide tract of S. (Upper) Nubla, ancient

are supposed bank, near Shendl, 3 m. from Kabushia.

region now forms part of the Sudan. See Garstang, Meroë: First Season's Executations, 1909-10, 1911.

Merom, Waters of (Hulch, Bahelretel), a lako of Palestine, mentloned in

mægd, maid), in the folk-lore of Great traversed by the Jordan. It is the Samoehonitis of Josephus, nearly triangular in shape, 41 m. leng by 34 m. broad.

Meropidæ, see BEE-EATER.

Merovingians, or Merwings, the name of the first dynasty of Frankish kings in Gaul, who ruled after the fall of the Roman empire. The name is taken from Merwig, King of the Salian (western) Franks, who united a few tribes under his sway (448-57 A.D.). His grandson, Clovis (481-511), extended the power of the dynasty, which flourished until 639, and finally gave place to the Carolingians) about 751. udes sur l'époque méro-

Merrick, James (1720-69), an English divine, biblical critic, and pect. educated at Reading and Oxferd. His works include: A Dissertation on Proverbs ix...: Prayers for a lime of Earthquakes and violent Floods. of Earthquakes and violent Floods, 1756: Poems on Sacred Subjects; Annotations on St. Jehn's Gospel, ch. His metrical verslen of the Psalms deserves high praise. Sec Doddridge's Letters: Chambers's Biog. Dict.

Merrill, the cap. of Lincoln co., Wisconsin, U.S.A., on the Wisconsin. 92 m. from the head of Green Bay: There are tanneries, and lumber and sash mills. Pop. (1910) 8689.

Merrimae, see Hampton Roads,

BATTLE OF.

Merrimack, or Merrimac, a river of S. New Hampshire, U.S.A., rising in the White Mts., flowing S. and E.N.E. through N. of Massachusetts to the Atlantic. Its many falls and rapids supply water-power for cotton-spinning, etc. It passes Concord, Maa-chester, Lowell, Nowburyport, and

other largo towns, and is navigable to Haverhill. Length 180 m. Merriman, Henry Seton (c. 1863-1903), the pen-name of Hugh Stowell Scott, an English novelist. For some time an underwriter at Lloyd's, he adopted a literary career (1889). winning success with his Russian story The Sowers, 1896. Among his best known works are: In Kedar's Tents, 1897; Roden's Corner, 1898; The Isle of Unrest, 1899; The Veltet Glove, 1901; The Vultures, 1902; Barlasch of the Guard, 1903; The Last Hopc, 1901.

Mope, 1991.

Merry del Val, Cardinal Raphael (b. 1865), a Roman Catholle ecclesiastic of Spanish descent, born in London, and educated in England at Slouch and Durham. He took orders (1888), became papal elamberlain (1892), prelate of the papal household (1897), and president of the Accademia Poutliand president of the Accademia Pontlflea (1899). For long Camerlere Parthe O.T., most northerly of the sories teelpante for Pope Leo XIII., he was

bishop of Niewa in partibus, and archibishop of Niewsia (1900), consistorial secretary and pontifical secretary of state (1903), and papal envoy at Queen Victoria's jubilee and King Edward VII.'s coronation. His father was secretary to the Spanish embassy. Court (1897-1999) and president of The Truth of the Pagal Capture (1901), the Probate Divorce and Advise the The Truth of the Papal Claims (1909) is his work.

Merse, or March, strictly a fertile dist. of S.E. Berwickshire, Scotland, the name being, however, commonly applied to the whole county. Formerly it denoted all the country bctween the Cheviots and Lammermuir

Hills.

Mersea, a well-wooded island of England, between the Colne Essex. and Blackwater estuaries, protected by a sea-wall. A causeway connects it with the mainland. It is noted for

oysters. Pop. about 1800.

Merseburg, atn. of Prussian Saxony, on the Saale, 9 m. S. of Halle. Its noted eathedral dates from the 11th century. It was once a favourite century. It was once a favourite royal German residence, and con-tains a Gothic castle (15th century). The bishoprio of M. existed from 968 down to the Reformation. Manufs. include machinery, leather, paper, toys, etc. Pop. 21,231.

Mers-el-Kebir (Sp. mazalquivir, great port), a fortified scapport of Algeria, N.W. coast, 5 m. N.W. of Oran, taken by the French (1830). (Sp.

European population about 2600. Mersenne, Marin (1588-1648), a French philosopher, theologian, and mathematician; studied at the College of La Flèche, where he met Descartes, whoso views, as expounded in the Méditation, he championed throughout his life. Entered the Minim order of friars in 1611. Taught philosophy at the convent at Nevers. His chief works are the Questiones celeberrimæ in Genesim (1623; a commentary on chap. vl. of Genesis and an attack on Athelem); a philosophical and theo-logical refutation of the Deists (1624); miscellaneous dissertations on theophysics, logy, (1634) and mathematics (1634), wherein M. disousses the possibility of flying, the velocity of light, etc.; The Mechanics of Galileo

(1634): Harmonie Universelle (1636). Mersey, a river rising in N. Derbyshire, England, flows W. between Cheshiro and Lancashire, passing Cheshiro and Lancashire, passing Stockport and Warrington, out into Liverpool Channel or Harbour, an arm of the Irish Sea. Chief trib., the Irwell from Manchester. In spite of sandbanks the river is second only to the Thames in commercial importance. Near Irlam on the estuary it is joined by the Manchester Shlp Canal.

the Probate, Divorce, and Admiralty Division of the same court (1909-10). He has sat in parliament as a Con-servative (1895-97), and from 1904-8 was president of the Railway and Canal Commission. He was president in 1912 of the commission appointed to enquiro into the circumstances attending the loss of the s.s. Titanic.

Mersina, a scaport in Asia Minor, 36 m. S.W. of Adana, with which it is connected by rail. Has an extensive trade, and exports wool, cotton, fruit, ccreals, and timber. Pop. 9000.

Mertensia, a genus of hardy plants (order Boraginaceæ). M. maritima, smooth Gromwell or oyster plant, grows on the seashores in N. Britain.

Merthyr-Tydvil, or Tydili, a co. and parl. bor. and market tn. of Glamorganshire. S. Wales, on the Taff, 24 m. N.N.W. of Cardiff. It is the centro of the iron and steel industry of S. Wales, with large collieries adjacent. The ecclesiastical parish of Dowlais forms part of the borough (see DOWLAIS). Browing and flannelweaving aro minor industries. returns two members to the House of Commons. It was made a county borough in 1907. Pop. (1911) 80,999.

Merion, a vil. in Surrey and suburb of London, 8 m. S.W. of Westminster. Pop. (1911) 12,938.

Merton, Walter de (d. 1277), founder of Merton College, Oxford, in all probability born at Merton, Surrey. In 1861 here was madeled the policy and 1261 he was made lord chancellor, and founded Merton, the first of our English colleges at Oxford (1264-74), when he became bishop of Rochester, and retained that see till his death three years later. See Hobbouse, three years later. Se Walter de Merton, 1859.

Merton College, Oxford, founded in 1263 by Walter do Merton (d. 1277), and the oldest college of its kind in The original endowment Oxford. was the income from the founder's house and estate at Malden, Surrey, which went to the support of Oxford scholars. Since its establishment the college has undergone various changes. A considerable part of the buildings dates from the 13th century, and are among the most interesting in Oxford.

Meru: 1. A tn. in the dept. of Olse, France, 15 m. S. of Bcauvais, and 25 m. N.N.W. of Paris. Manufs. toys, chess pieces and boards, etc. Mersey, John Charles Bigham, Lord Pop. 5500. 2. A mountain in (b. 1840), an English judge, educated Masailand, German East Africa, at Liverpool Institute, and also in lying 40 m. W.S.W. of Kilimanjaro.

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and a surface crator.

Meru, in Hindu mythology, fabulous mountain, the abode of Vishnu. It is the most sacred of all mythical mountains, is supposed to stand at the centre of the world, and is 80,000 leagues high.

Merubidæ, a family of birds em-bracing the biackbirds, thrushes, dippers (Cinclus), orioles (Oriolus), pittas (Pitta), rock-thrushes (Pelrocincla), and other dentirostral genera. Mr. Vigors places this family between the Laniade or shrikes, and tho

Sylviadæ or warbiers.

Merulius, a genus of fungi. M. lacrymans is the destructive fungus which causes dry rot of timber.

Merv, or Meru, a tn. and oasis of Turkestan, in the Transcasplan prov., Russian Central Asia, situated on the caravan road between Meshed and Bokhara, in the valley of the Murghab about 300 m. S.E. of Khiya. Over 1470 sq. m. of the oasis are under 11/10 Eq. m. of the cass are under cultivation, yielding plentiful crops of millet, rice, wheat, barley, aud cotton. The majority of the juhabitants are Tekke Tureomans, but many Armenian merchants have taken up their abode in the modern city. The old town was originally founded by Alexander the Great, but having been destroyed, it was rebuilt by Antiochus I., and received the name of Antiochia Margiana. The captive soldiers of Crassus were settled hero by Orodes. In after times it was one of the four imperial cities of Khorasthe and many of Perslan monarchs made it their capital, but In 1786 it was taken and sacked by the Usbeks, a blow from the effects of which It has nover recovered. surrounding country, which bears the name of Maroochak, is celebrated for its fruits, but the climato is very bot and dry. The ruins of the old town lio 18 m. N.E. of the present Russian city, which is fast becoming important The ruins of the old town owing to its strategic position. The country became Russian in 1883. Pop. of oasis 160,000; of tn. 9000.

Merville, a tn. in the dept. of Nord, France, at the junction of the Bourro Canal with the Lys. 8 m. S. of Hago-brouck and 20 m. W. of Lille. It is a well-built town and has important manufs. of damask, linen, and embroideries; there are also salt rofineries, brewerles, and brick works. Pop. 7600.

Merxem, a com. of Belgium, form-ing a N.E. suburb of Antworp. Pop.

15,000.

Méryon, Charles (1821-68), a noted French etcher, born at Parls. His works are: 'Lo Pont du Change,' 'Abside de Notre Dame,' 'La Viellio Morgue,' 'Stryge,' etc. See Wedmore

Has an altitude of about 15,500 ft. in Art Journal, 1881, and Burty's Monograph, 1879.

Merzig, a tn. In the Rhine prov., Prussia, 22 m. S. of Troves. Has an ancient church and town Manufs. woollens, terra-cotta, etc. Pop. 8340.

Mesaba Mountains, a range in St. Louis co., Minnesota, U.S.A., and one of the largest iron-producing districts of the world, with an annual output of about 12,000,000 tons.

Mesague, a tn. in the prov. of Leece, Italy, 12 m. S.W. of Brindisi. Exports olive oil, fruit, wine, etc. Pop.

12,000.

Mesana, a tn. in Gujorat, India, 40 m. N. by W. of Ahmadabad. Pop. 10,000.

Mesdag, Hendrik Wilhelm (1831-1905), a Dutch marine painter, born at Gröningen. He was a banker till 1867, when he took up art seriously and studied under Alma Tadema and Rociofs at the Hagne. He set himself to convey the idea of immensity and boundless space in the sky and sea, representing water-mases and motions most successfully. Ills pictures include: 'Fishing Boats at Scheveningen,' 'Morning on the Scheldt,' 'In Perli,' and numerous views of the North Sea, and are to be seen at the Luxembourg, Parls, and in the Hague museums.

Mesembryanthemum, or Fig Marlgold, a genus of succulent plants with thick fleshy leaves and brillant flowers. Some species are half-hardy in dry sunny positions. M. crystalli-num, or lee plant, is a trailing annual bearing white flowers in summer and frosted leaves and stems. A number of species of herbaccous and shrubby habits are grown in the greenhouse.

Meseritz, a tn. ln Posen, Prussia, 42 m. E. by S. of Küstrin, Pop. 5975.

Mesheherlaks, a race of E. Russla, numbering about 160,000, 125,000 of whom are Mohammedaus. They are whom are Mohammedaus. They are of Ugro-Finnish origin, and found in the governments of Orenburg, Ufa, Penza, Kazan, Ryazan, Vyatka, Tambov, and Saratov. They are closely allied to the Voguls and Daciviles and in page of the governments. Bashkirs, and in many of the governments have adopted Russian religion, language, and customs.

meion, ianguage, and customs.

Meshed, Mushed, or Mash-had, a
cap. of the prov. of Khorassan, N.E.
Persia, 195 m. N.W. of Herat,
Afginantsan. It is a walled city,
situated in a fertile plain, and is
famous for the magnificent mausoleum of the innum Riza, visited
annually by pilgrims. Mannis, include silks, velvets, carpets, shawls,
worked metals, etc. Pop. about worked metals, etc. Pop, about 60.000.

Meshed All, or Nejef, a wailed tn. of

and is a place of Shiite pligrimage.

Mesitylene (1:3:5, or symmetrical trimethyl benzene, C,H,(CH,),), an aromatic hydrocarbon found in small quantities in coal tar. It is best prepared by distilling acetone with snlphuric aoid. M. is a colourless, moblic, pleasant smelling liquid holling at 164.5° C. Treated with concentrated nitric acid it yields mono- and di-nitromesitylene, but with dilute nitrio acid it yields acids by the successive oxidation of the methyl groups.

power similar to magnetism which exercises an extraordinary influence on the human hody. He published an account of his discovery in 1775. In 1778 he went to Paris, where his system obtained the support of members of the medical profession; hut he refused two offers, one of an annual pension of 30,000 livres and the other of 340,000 livres, to reveal his secret, and this induced the government to appoint a commission, whose report was unfavourable. He now fell into disrepute, retired to Mcershurg, and

assepute, retired to Meershurg, and spent the rest of his life in obscurity. See Life by Kerner, 1856.

Mesmerism, see Hypnotism.
Mesne (middle, intermediate):
Mesne profils, in law, the profits received by a tenant in possession during the period for which he has wrongfully kept the lessor out of possession. In actions for the recovery of land hy a landlord against a tenant whose term has expired, or has been duly determined by a notice to quit, or against persons claiming possession under such tenant, a claim for mesno profits may, by the rules of the Supremo Court, be joined on a specially endorsed writ under Order XIV. together with the liquidated claim for possession, the ment of the procedure under this order heing that it is both summery and excels. that it is noth summary and speedy, and the defendant, unless he has some sort of defence, will only get leave to defend the action at all on terms, as, for example, by giving security.

Mesne process, in law, that part of the proceedings in a suit which intervenes between the original process or writ of the final issue, and which issues pending the suit on some collateral matter. It is sometimes used to denoto the wholo process which issues prior to actual oxecution.

Asiatio Turkey, in the vilayet of lord who held land of a superior lord, Bagdad. It contains the tomh of Ali, but who granted away a part of it to but who granted away a part of it to another person; In which case he was tenant to the superior, but lord or

superior to his own grantee.

Mesopotamia, (Gk. Μεσοποταμός, from μέσος, middle, ποταμός, river), from méros, middle, moranés, riveri, the land hetweon the two rivers, i.e. the Euphrates on the W. and the Tigris on the E. The district to which the name is applied is rather loosely defined; it refers to the whole river country which stretches eastward from N. Syria to the mountainous treat of country dividing Persis from tract of country dividing Persia from the steppes and plains at the head of oxidation of the methyl groups.

Mesmer, Franz (or Friedrich-Anton)

Mesmer, Franz (or Friedrich-Anton)

(1733-1815), founded animal magnetism (q.v.), or mesmerism; graduated M.D. at Vienna in 1766. About ruled by the Babylonian and Assyrian

1772 he hegan, along with Father Hell, to Investigate the curative powers of the magnet, and was led to the district of the Turkish dominions in Asia which is known as El-Jezirch adopt the opinion that there exists a (Syriao Gazirlha, Island) from Samo-power civilen to magnetism which is at (modern Samoil) on the Full and the control of the country once in the steppes and plains at the head of the Power of the country once in the steppes and plains at the head of the Power once in the steppes and plains at the head of the Power of the steppes and plains at the head of the Power of the country once in the steppes and plains at the head of the Power once in the steppes and plains at the head of the Power once in the (Syriao Gazirtha, Island) from Samo-sata (modern Samait) on the Euphrates to where that river apphrates to where that river approaches the Tigris ahovo Bagdad at the point of the great wall, the so-called Median Wall, huit like the Chinese Wall, as a protection against the nomad tribes of the N. In this narrower significance, the northern portion is hill country (of the Taurus Mts.), with fertile plains and valleys, watered by the Belikh till its confluence with the Euphrates; then follows, southward, an undulating follows, southward, an undulating fertilo plain with a distinct mountain fertile plain with a distinct mountain chain, Sinjar, Iying E. and W., and finally an arid stoppe country reaching to the alluvial soil and the network of ancient canals and river system that formed the centro of ancient Bahylonia. The northern parts of M. are covered with the mounds which mark the sites of ancient towns still unexplored; the steppe-land is the home of the nomad Arab tribes, known as Shammar, who moved here from Central Arabia in the 16th century when the Ottoman Turks conquered the country. The building of the Bagdad Railway, and the irrigation scheme, under the direction of Sir William Willcocks, may do much for the country, though the disruption of the Turkish empire has prevented any real advance. A letter of an Egyptian lieutenant of Thothmes I. of Egypt speaks of Naharin in the late 16th century n.c., thus giving the earliest Semitio namo of a district somewhere on the Euphrates or beyond. This name occurs again as the place whence came a wife for Isaac (Gen. xxiv. 10), Harran (Carrhæ) is closely connected with the early history of Abraham. teral matter. It is sometimes used that the carry, however, goes far back denote the whole process which sues prior to actual execution.

Mesne ford, in the feudal system, a linseriptions that an early Babylonian king, Zugal-zaggisi, spread his king-

dom through M. as far as the Mediter- | empire to which it has since belonged. ranean. How the Semitic invasions of the third millennium reached Babylonin is not certain. It is possible that one wave came down from the N. through M. and caused the carliest building of the so-called Median Wall. The N. Babylonian king, Sargon of Akkad (Agade), somewhere during the third millennium reduced M. in his relations with the W., and must bavo brought much cultivation and trade intercourso to the country. About this time, too, we hear of the Amurru (Amorites) of N. Syria.,

It seems that in face of this immigration Khammurnbi, or Hammurabi, the author of the great Babylonian code of laws, occupied M., and was suzerain in Asshur (Assyrin), which now becomes prominent. Lnter the Amorites, evidently from N. Syria, gave wny before a northern, probably Hittite, movement. About 1780 B.C. the Babylonians were invaded by the Kassites from Elam, the mountainous district on their castern border, and tbeir western and northern dominions, allowing also the riso of Assyria, whose chief city was nt Assyria, whose chief city was ne Calah (Nimrud), on the eastern border of M. Another state also comes into prominence—that of Mitnuni, whose power extended to Assyria. It acted as a buffer-state between Egypt and Assyria, lying as it did aeross the north-western parts of M. and burring the way to the road through Palestine to Egypt. Through the long opoch of the rise of the Assyrlan empire, with lts periods of unquestioned supremacy, decline, and recovery, M. was nt the mercy of the warring powers, its kings

ŗ of the N. Syrian and Israelite princes. Colonics of Assyrians were then settled in M. In 729 B.c. Tiglath-pileser III. of Assyrin was acknowledged supremo from Babyloain to the Mediterranean. Under his rule, his dominions were strictly organised, and n strong central government was established. He broke the Hittle power in North M, and in Armenia. The powerful empire of Esar-baddon, 680, crumbled before the irruption of the Medes who sacked Ninevell in 606. For the fall of the Medinu empire and the riso of Cyrus, see Persia. The establishment of the Sciencid kingdoms after the death of Alex-nnder the Great brought many Greek

dates from 1516

Mesozoa, a group of lowly auimal organisms intermediate between the Protozoa or unicellular organisms, and the Mctazoa, or those of many-celled structures. The best known types are the family Dicyemidæ, which are ciliated thread-like organisms found parasitic in the kidneys of

cuttlefish. Mesozoie, n subdivision of geo-logical time, between the Palmozeic and the Caiuozoic, and it includes the Triassic, Jurassic, and Cretaccous systems, which cover much of England, France, N. Germany, the Alps, and the western states of America. Tho M. ages uppear to have been uabroken by volcanic cruptions, and ia this respect as well as in their fauna and flora, differ from the Palmozolo Cycads and conifers repreages. sented the enrly M. flora, and later, monocotyledons flourished. In the animal world great changes took place. Brachlopods diminished in number, as also did the Crinoids, while the Echinoderms, as represented by the Urchins, occupied n promineat position. The Ammonites were the typical M. cephalopeda, and the vurlety and abundance of reptillan life constitutes a remarkable feature of the life of the period. The first mammals made their appearance in marsupial forms during the M. time, and the first species of bird, Archaepicryx macrura, has been found in the Jurnssie rocks of Germany

Mespilus, a genus of hardy decidu-ous trees (order Rosacce), usually Incorporated with the genus Pyrus. Besides M. germanica, the Common Medlar (q.v.), M. smithii with large white flowers is sometimes grown.

ınd и., Mess (O.Fr. mes, modern mets, dish). iu its original meaning, n portion of food, or provision of food for a party for one meal. It was especially applied iu early times to more or less liquid food, such as porridge, soup, or broth (cf. the biblical 'mess of pottage'). The term is now used of a company of persons who sit nt meals together, especially of the members of an official or professional body. At one time the number in n M. was usually a small group of about four, scated at one tuble and sharing the same dishes. In the Inns of Court, parties of four benchers or four students are still common, but in the naval or mill-tary service the number la n M. Is considerably larger, consisting of the ander the Great brought many Greek purities into which a ship's company settlements. Islum and the founding of the caliphate of Bagdad brought in Most ships in the British nuvy have new culture, and the final period, that the officers' or wurd-room M., the of the Ottomau Turks and the injunior officers' M., and the warrant-corporation of M. in the Turkish officers' M. The admiral and the

captain usually take their meals 28, 27. He died about 3 B.C.-3. A.D. alone. Similarly in the army there are officers' and sergeants' Ms., and separato Ms. for the men. Tho M. is marian, and an orator; but none of generally managed by a committee of officers and supported by the jointsubscriptions of members, supple the property of from the government. The rank and file pay at a rate of under 3s. a weck, and the officers more in proportion, receiving for this groceries, vegetables, crockery, etc., in addition to their free daily rations of bread and meat, at least two-thirds of which must be taken up by the men, while a money allowance may be granted instead of the remaining third and pa the M. fund. Officers are not to take up any fixed portion crations if they prefer to ha

money allowance. There is a small monthly subscription for and stupidity of the emperor, and The M. bills are pald every month, but if extras, such as wine, beer, or cigars are desired from the eanteen, they are paid for at the time. Married men are allowed to dine at home, and there are sometimes certain exemptions for others. The senior officer present is responsible for the disci-pline. Billiard, smoking, and read-ing rooms are often attached to the M. house, as well as the 'common room

nouse, as wen as the common room or dining-hail, kitchen, and cellars.

Messageries Maritimes, the chief passenger steamship line in France, with headquarters at Marseilles, and London offices at 97 Cannon Street, E.C. It possesses a fleet of sixty-five steamers, aggregating 293,669 tons. It trades with the Levant and Black Sea; carries mails to Italy, Egypt, Syria, Grecce, India, China, and Spain, and includes a service to Australia, and S. America, and the S.E.

coast of Africa. Messala, or Messalla, the name of a distinguished family of the Valeria

M. is continually introduced. Of M.'s many works—oratorical, historical, grammatical, and poetical—some of the titles alone remain. Yet a vague estimate of his literary merit may be formed from the testimonies of his

contemporaries and successors.

Messalina, Valeria, the daughter of Mareus Valerius Messala Barbatus, the Roman emperor, oman infamous for her

her avarice, and the ich she perpetrated. itage of the weakness

newspapers, magazines, and washnewspapers, magazines, and washing. There are trained cooks, but
him, she played the adulteress withoutrestraint, and unrelentingly caused
to help in setting the table and
serving the food and as general
assistant. Breakfast, lunch, tea, and
to be put to death who stood in the
way of her unhallowed gratifications,
and The best blood of Rome flowed at her
dinner are all served in the barracks.
The M bills are raid every month pleasure. Among her victims were the daughters of Germanieus and Drusus, Justus Catonius, M. Vinelus, Valerius Asiaticus, and her con-federate Polyblus. She went so far in vice as to offer her charms for sale like a common prostitute, and at last, during a temporary absence of the emperor at Ostia (48 A.D.), she pub-llely married one of her favourites, C. Silius, upon which Narcissus, one of the emperor's freedmen, reprosented to him that M. was aiming at his destruction, and received orders for her execution. She was put to death by Enodus, a tribune of the guards, in the gardens of Luculius, Her name has become a 48 A.D. by-word for crime and lust.

Messapii, see APULIA. Messene, cap. of Messenia in Greece, founded by Epaminondas in 369 n.c. As it was erected as a check to the power of Sparta, it was made of great Pausanius describes it. strength. Now occupied by village of Mauromati.

gens at Rome. The first who bore the name of Messala was M. Valerius officers of the British government, Maximus Corvinus Messala, oonsul who are appointed or held in readito carry official despatches, both ome and abroad. They are emed under the secretaries of state. "essenia, a country of ancient

M. Valerius Corvinus. He fought on Laconica, on the N. by Elis and the republican side at the battle of Arcadia, and was surrounded by the Philippi (42 B.C.), s separated from Laconica by ountain chain of Taygetus, and

pardoned by the came one of the suntain chain of Taygetus, and friends of Augustus. He was oonsul from Elis and Arcadia by the R. 31 B.C., and proconsul of Aquitania Neda and the high land which runs

between the bed of the Neda and the sources of Pamisus. M. is described by Pausanias as the most fertic province in the Peloponnesus. The western part of M. is drained by the R. Pamisus, which rises in the mountains hetween Arcadia and M., and flows southward into the Messenian bay (Guif of Koroni). The basin of the Pamisus is divided into two distinct parts. The upper part, usually called the plain of Stenyclérus, is of small extent and moderate fertility, but the lower part S. of Ithome is an extensivo plain, cele-hrated in ancient times for its great rated in ancient times for its great fertility, whence it was frequently called Macaria, or the 'Bicssed.' The western part of M. is diversified by hills and valleys, but contains no high mountains. The chief towns on the western coast were Pyios and Mothone, or Mcthone (Modon). The bay of Pyios (Macarine) which is very property of the property of the property of the second second property of the second second property of the second of Pylos (Navarino), which is pro-tected from the swell of the sea by the island of Sphacteria (Sphagia), is the best harbour in the Peloponnesns. The only town inland of any importance was Messeue, at the foot of Mt. Ithome, on the summit of which was the oltadei. The country is now a province of Greece, and produces fruit in abundance. Pop. 128,000.

Messenius, Johan (c. 1579-1636), a Swedsh historian and dramatic

author. The Emperor Rodolpho made him poeta Casarcus, and ho becamo professor of law at Upsala Univer-sity (1609). He was imprisoned (1616) sity (1609). He was imprisoned (1010) on a charge of treasonable correspondence with the Jesuits. His older historical work, Scandia Illustrata, was written in confinement. Other works were: Chronicon episcoporum per Suecian: (1611), and the

Män.

Messenius, Arnold Johan (1608-51), a son of Johan M., was historiographer to Christina of Sweden (1646), and ennobled (1647). Arnold and his son were executed for writing a libel on the royal family. Seo Anecdotes de Suède (tho Hague), 1716. Messiah (Gk. Meggias, Aram.

Mishina, anolnied=Gk. Xpioros), a title applied to Jesus as fulfilling the ionr-continued lope of the Jews for a deliverer. The messianic idea was of comparatively late development or comparatively into development subjects and portraits. In San Greamong the Hehrews, and in its later roof oat Messlan is his triptyen of the form dates only from the Exile. Before this, the Messlah was regarded as purely human. See Drummond's National Gallery contains his 'SalJewish Messlah, 1877; and Stanton's Jewish Messlah, 1877; and Stanton's Jewish and Christian Messlah, 1886. See Moyor, Kunsller-Lexikon; Lanzi, Bastings' Dictionary of the Bible.

Messina, a city of Sicily, cap. of the prov. Messina, on the Strait of Messina, about 8 m. N.N.W. of Reggio. Formerly a beautiful and flourishing city, it was totally destroyed in 1908 by an cartiquake, causing the loss of 96,000 lives, a total nover exceeded since the Syrian cartifugate of 528 A.D. in which total nover exceeded since the Syrian earthquake of 526 A.D., in which 120,000 persons perished. Its original name was Zanelo (Ζάγκλον or ζάγκλον, tho Sicilian equivalent of the Greek Σρέπανον). The harbour is one of the best in the world, and not being damaged by the carthquake. still carries on an extensive trade, the chlef exports being oranges and lemons. Of the university only the law faculty has heen reopened, but the valuable Greek MSS., which were in the library, have been saved, as well as some of the treasures of the weil as some of the measures of who museo. The cathedral, which dated back to the Norman period, was almost totally destroyed, but the statue of Don John of Austria, in the statue of Don John of Austria, in the Corso Cavour, still remains. Before the cartiquake, M. and the neighbouring villages had a population of 167,000; it now stands at about 80,000. It has, however, been resolved to rebuild the town on its former site. M. was founded by pirates from Cume in the 8th century B.C. During the Punio wars it was a Roman naval station. In 1072 the Normans expelled the Saracens who had held possession for over 250 years. A little over a century later M. belonged to the house of Hohenstaufen, under the Emperor Henry VI., and in 1282 it passed to Spala, who held possession until 1713. Great damage was done to the oity in 1848, damage was done to the oity in 1848, when it was taken by the Neapoiitan troops, after a flereo bombardment of fivo days. The city was visited by a plaguo in 1743, whon 40,000 people Lexicon öfter ramnkunnige Svenska were carried off, and it has also suffered severely from earthquakes, the

fered severely from carthquakes, the most disastrous occurring in 1908, which destroyed the city and avolved a loss of 70,000 lives.

Messins, Antonello da, or Antonello d'Antonio (Degli Antony) (c. 1414-c. 1493), an Italian painter, a son of the architect and painter, Salvadore di Antonio. He is supposed to have learnt from Van Eyek tho secret of painting in oils and to have introduced the art into Italy (c. 1460). His works include historical religious subjects and portraits. In San Gresubjects and portralts. In San Grea breadth varying from 2½ m. With a breadth varying from 2½ m. to 12 m. Here are to be found the Scylla and Charybdis of Greek mythology, the former a rook off the small town of Seylla, the latter a rapid or whirlpool in front of the harbour of M.

Messuage, a legal term signifying a dweiling-house and appurtenances, that is, the ground attached thereto.

Mestre, a tn. Italy in the prov. of Venice, situated on a lagoon 6 m. N.W. of the city of that name. Pop. 12,000. Meta, a river of Colombia, S.

America, which rises in the Sumapaz glacier, 40 m. S. of Bogota. It flows N.E. to the Orinoco, after a course of about 650 m.

Metabolism, the chemical changes of living matter, denotes the pro-esses of growth (anabolism) and waste (ratabolism) in the proto-plasmic material of the living cell. Thus it will be dealt with fully under PHYSIOLOGY. See also BIOLOGY.

Metallography, see METALLURGY.

Metallurgy, regarded sometimes as a branch of applied chemistry, deals with the study of the processes of extracting metals from their ores, and their proparation in a suitable state for the various manufacturing processes. Only a few metals occur native, the majority being found in combination with other substances. An oro is any mineral substance containing enough metal to pay for extraction. The ores raised to the surface are usually mixed with gangue, or earthy materials, from Burface which they are separated as much as possible by mechanical operations, such as crushing, sorting, washing, etc. Before smelting, some ores are further prepared by calcination (simple heating) or reasting (heating in a current of air), when volatile matter is driven off, carbonates are the metal under str decomposed to oxides, and sulphides kinds, i.e. whether are decomposed with

of oxides and sulphat pared ore is smelted in lined with fire-resisting

the metal. For acid ores, i.e. ores can be ascribed to the variation in the having a siliceous gangue, lime, alumina, fluorspar, etc., are used as fluxes, while for basic ores, i.e. ores quantity of nickel or tungsten in a with a gangue containing lime or steel makes it sufficiently hard to be siviled in the sufficiently hard to be sufficiently as the sufficiently hard to be sufficiently for the sufficient of the sufficien similar infusible substances, quartz, sumilar infusible substances, quartz, used for armour plates. The infunces pare, or clay are the fluxes used. If the notals cannot be overlooked, according as it respectively contains excess of silica or of exide. The smelt-ing operation is a process of reduction, the oxide in combination with the metal being removed by the action of infunces of investigation of metals

Messina, Strait of (ancient Mamer-1 the reducing agents, the chief of tinum Fretum), soparates Sicily from which are carbon, carbon monoxide, Italy, and has a length of 24 m. with and sometimes metals. In some and sometimes metals. In some operations (e.g. copper and nickel smelting) the metal is first obtained as a sulphido, called a 'regulus' or 'matte,' which is subsequently partially oxidised and finally troated with unchanged sulphides, when the sulphur is removed and the metal obtained. The metals zinc and mercury being very volatilo, are obtained by distillation, while arsenie is obtained by a process of sublimation.
The term 'liquation' is applied to the removal of an easily fusible metal from a mixture of metals which do not alloy, or from a less oasily fusible gangue, by simple heating. 'Scorifigangue, by simple heating. 'Scorifi-cation' is the reasting of an alloy in order to remove the more casily oxidisable metal. The alloy, say lead and silver, is melted in an oxidising atmosphere. Litharge is formed as a siag on the surface and is removed, the operation proceeding until only the silver is left. 'Cupellation' is a similar operation, base metals being removed from gold and silver by oxidation and solution in oxide of lead. The operation is earried out on a hearth of absorbent material (bono ash), which absorbs the fused oxido but leaves the metal. Some metals unite with meroury to form amai-Thus gold and silver are extracted from their orcs by treating the crushod ore with mercury. This is the 'amalgamation' process, tho motal being obtained from the amalgam by distilling off the mercury. Some metals, e.g. aluminium, are obtained from their ores by electrolytic methods, while others are extracted by the 'wet way,' as in the cyanido process for gold and the wet copper extraction process. For the various purposes in the arts, it is necessary to know the behaviour of the metal under stress of various kinds, i.e. whether or not it is or tenacious. nd electrical con-

inuto traces of imsuitable flux being used to combine purities influence these properties to with the 'gangue' or 'voinstuff' to a great extent. Thus the variations form a slag which may be run off from in wrought iron, cast iron, and steel the metal. For acid ores, i.e. ores can be ascribed to the variation in the used for armour plates. The in-

at importance, and

and alloys, and the study has ex-sodium. (b) Thermal furnace with cenanical fused material.—Hero the heat is tempera-

ding. ELECTRO - METALLURGY. --In its widest sense, the term electrometallurgy includes the processes of electro-extraction, refining, and plating, and iu dealing with the subject. the different sub-sections will be treated under special designations, electro-smelting, electrosuch as

plating, etc. Electro-smelling.—Electric smelt-ing furnaces used in metallurgical operations may be divided into three main types: viz. (1) Induction furnaces; (2) Resistance furnaces; (3)

Are furnaces.

(1), The induction furnace is used for purposes of inciting as distinct from smelting, i.e. for melting down mixtures of different metals rather than for extracting metals from their ores. The furnace consists of a large crueible in which the metal is heated out of contact with any electrodes, whereby oxidation is practically negligible, since there is no action of furnace gases. The Kiellin furnace is of this type, and is used for making steel. It consists of a primary coil of Insulated copper wire wound round an insulated core, to which is de-livered a strong alternating current of 90 amperes at 3000 volts. An induced current of 3000 amperes and Tyolts is set up in the annular erneible or hearth of the furnace containing the steel and which forms the secondary. Any grade of steel can be produced from 0.1 to 0.5 per cent. or more of earbon.

(2) Resistance furnaces are of many types, and can be used as smelting or melting furnaces by a variation in the construction. The electrolytic furnace may be regarded as a modification of the resistance furnace, where, in addition to the heating effect of the current, there is also electrolysis. (a) Internal core furnace. -In this furnace is laid a continuous core of coke between two carbon electrodes, and around this core is placed the material to be heated. Carboruudum is mado by the use of this type of resistance furnice. Sand and finely broken coke are mixed with salt and sawdist and packed round the cere, a current of 200 velts being used, which is gradually reduced to 80 volts during some thirty hours. Silicon carbido is formed around the core, which is converted into graphite. This type of furnace ls also used for the production of graphite, and with modifications of the process, for carbon bisulphide and

valuable generated by the resistance of the furnace charge to the electric current.
Of this type are the Héroult and
Keller furnaces for the manufacture of steel. In the former, two large electrodes pass through the roof of the furuace on to a basic-lined hearth. An alternating current of 4000 amperes and 110 volts is used. and the intensity of the current passing through the bath is regulated by increasing or decreasing the width of the air-gap between the slag line and the electrodes. Phospherus is preduced on a large scale by the use of this class of furnace, by the heating of phosphoric acid and coke. Crude calcium phosphate mixed with sand may be used, when the phosphorns distils off through a flue and the lime and other bases are tapped off as slag. Of late years a considerable iadustry has been set up in the manufacture of calciun carbide. A mix-ture of lime and excess of coke dust is heated up in furnaces of the abeve typo by an alternating current. Calcium carbide is formed according to the equation CaO+3C=CaC₁+CO. (e) Electrolytic furnace. - In type of resistance furnace, the fused compound is electrolysed. A concompound is electrolysed. A con-tinuous current is employed and the metal is liberated at the negative pole. The preparation of aliminium is the most important application of this furnace. The furnace consists of a metal ease lined with earbou or alumina, the latter for preference, having a large carbon positive pole inserted at the top and an iron or carbon plate at the bottom, which is connected to the urgative pole of the connected to the negative pole of the dynamo. Molten ervollte is used in the bath and alumina is constantly added. The alumina is electrolysed, aluminlum being ruu off periodically from the bettom of the bath, while oxygen is deposited on the carbon anode, which is thus gradually burnt away, forming carbon menoxide. A current of 5 or 7 volts is used and the action is continuous. Magaesium le now obtained in a similar manner by the electrolysis of carnallite, the natural double chloride of magnesium and petassium. Sodium and potassium are also made by electrolytic methods. (For the Castner process, see Electro-chemistry.)

(3) Are furnaces.—By the use of a small electric furnace, Molesan was successful in fosing such substances as lime and in preparing specimens of the more difficultly reducible metals, such as chromhum, calclum, etc. By placing the material to be treated in a hollow tube of curbon at cyanides of potassium and right angles to the electrodes, he

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made the furnace reverberatory, and surfaces to be welded are placed by a sultably disposed magnet the together and both are connected to ejectric are could be deflected on to the positive pole of a generator giving the material. The type of arc furnace now used for melting steel is the Stassano furnace, which rovolves round an axis inclined about ?* to the vertical, and is lined with magnesia brick. Three electrodes meet nearly in the centre of the furnace, their distance apart being regulated

similar type of furnace, the volatilised metal being condensed in suitable chambers. In all these furnaces, electric energy replaces the coal, coke, or gas required for heating. In countries where fuel is cheap, electric furnaces are not commercially employed owing to the increased cost of production. Where water-power is available (as at Niagara, nitrogen fixation plant), however, the electro-chemical industries can be pursued at a mini-

mum of cost.

Electric welding .- There are three principal processes of electric welding: (1) That in which the metal is heated by incandescence, as in the Elihu Thompson process. The two pleess to be united are connected with opposite poles of powerful current, and then brought into contact. Since the surfaces ore uneven, contact only occurs at a few points, and the current (about 10,000 amperes per sq. inch of sectional area at the joint) is conducted through a restricted area. Hence these parts are raised to incandescence, and becoming softened can be pressed The surrounding faces become superficially oxidised, and are thus covered by an inferior conductor, with the result that the whole mass is raised to the necessary welding temperature due to the added resistance in the path of the current. (2) The Burton liquid forge metal from sticking. The electrodes type, in which the metal to be heated is connected to the negative pole of a generator (current 110 voits), and on the multiple system, on an insist hen plunged into a lead-lined vat (the lead connected with the positive nois) content a circulation of the tive nois) containing the specific pole of the tive nois) contain a circulation of the tive nois) containing the specific pole of the tive nois) containing the province of the provi tive pole) containing acid or sultable salir

powerful current pass bath from the load immersed metal, which becomes the cathode. The impurities fall to covered with bubbles of hydrogen, the bottom of the bath, and these The resistance of the metal surface silmes which collect there are treated covered with hydrogen is so great further for precious metals. that the metal is rapidly raised to that the metal is rapidly raised to forms no small part of the profit of welding heat, and may be removed the method. The pure copper is put and welded in the usual way on the on the market as electro-deposited anyll, or may be treated for anneal-plate and is the purest copper known. Ing or hending. (3) That in which the electro-deposition is the placetic area in wheth the electro-deposition is a purished to work which procedure. lng or hending. (3) That in which the electric arc is used for heating. applied to work which necessitates In the 'Bernados' process the the deposition of metals by means

the positive pole of a generator giving a current of about 120 volts. The negative pole is a rod of carbon which, held by insulated tongs, is brought into contact with the surfaces. On withdrawing the carbon an electric are about 2½ in. in length is formed, which, directed on to the surfaces, burns them together as in autogenous soldering. In the "Tereiner" process the arc is deflected by the use of a powerful electro-magnet, the whole arrangement forming a kind of electric blowpipe.

Electric annealing.—Annealing of hardened steel plates, such as Harvoyised steel armour plates, is often necessary locally for riveting pur-poses. This is done by placing a souple of copper plates, one on each side of the plate, and sending a current between them and hence through the stretch of plate between. A current of 3000-6000 amperes at 4 volts is used, and thus a small patch of steel plate is raised to redness. The current is then slowly reduced, and the plate slowly cooled, when the steel is found to be suffi-

when the steel is found to be suffi-ciently softened to be workable.

Electro-refining.— In the short space allotted to this article it will not be possible to allude to more than one example, viz., the electro-refining of copper. The arrange-ment of the baths and the current volume employed varies for different refineries. The current volume emergily used is from 10-15 among generally used is from 10-15 amperes per sq. ft. The solution employed as electrolyto contains about 2 lbs. of copper sulphate and 4 to 10 ozs. of sulphuric acid in each gallon of water. The anode is of crudo copper and the cathode plate is of pure sheet copper, which is first blackleaded to provent the precipitated metal from sticking. The electrodes are placed about 1½ to 2 in. apart, and the baths are arranged generally solution by siphoning. the current, the crude

gradually dissolved and in the pure state upon. The impurities fall to

of the electric currents, and includes, eyanide of the noble metal and electro-plating and electro-typing. Electro deposition will, therefore, be hriefly treated under these two heads.

Electro-plating is the term applied to the covering of base metals hy thin films of a nobler metal for the thin films of a nobler metal for the sake of appearance or for a high lustre. For plating it is essential that perfect cleanliness be insisted upon, and special care be taken in the preparation of the electro-plating solution. Solution must also he kept moving in order to keep it of uniform density and strength. This is done by the use of paddles, by slowly moving electrodes, or by by slowly moving cleetrodes, or by allowing the solution to tricklo through a series of vats arranged in

terrace form.

For 'copper' plating a solution of copper sulphate, as described in Electro-refining, is used. The solution is contained generally in lead-lined wooden vats. With current density of 10-15 amperes per sq. ft. a good regulino copper surface is obtained on the article cathode. forms the For which coppering metals such as iron, zino, etc., which are strongly electropositivo, the acid solution of copper sulphate cannot he used. The solution used must be alkalino, and may be made up by adding concentrated ammonia to copper sulphato solution until the precipitate formed just dissoives. Potassium cyanide solution is then added until the solution is decolorised, and about half as much cyanido as was used added in The solution is then diluted about half, and may then be used for the metals named. When covered with a thin deposit, the work may be transferred after washing to ordinary acidulated hath to obtain a further deposit.

The deposition of copper on parts only of ornamental work is called 'parcel-coppering.' The ornamental work is generally of brass. Tho brass is first cleaned in hot potash solution, after polishing, and then passed through solution of potassium potassium The work designed to cyanide. escapo deposition is paiated with asphaltum or other varnish, and when dry is passed through nitric After swilling it is transferred to the coppering vat, and the current passed for about two hours. The blackleaded carefully, work is washed after removal from composition for taking the the var, dried, the varnish removed is that formulated above, and is by turpeutine, which is in turn run into a cast-iron moulding box-removed by potash, and finished by The surface of the composition is seratch-brushing, polishing, and lac-freed from bubbles with a hot from

potassium are used. Caro must be taken in regard to the purity of the materials, and for 'parcel' werk only the best copal varnish must be used for 'stopping off,' since asphal-

tum is affected by cyanide solutions.
'Nickel' deposits are of extreme value owing to the fine polish which can be imparted to it, and also because of its extreme durability. The solution used is neutral nickelammonium-sulphate (12 oz. to 1 gal. of water). The work to be plated must be scrupulously clean, and highly polished before entering the bath. 'Striking' is generally resorted to in order to start dopositiea, i.c. the surface is coated rapidly (using a fairly high potential difference of about 6 volts) in order to prevent oxidation. This operation only obtains for a moment, otherwise the doposit hecomes powdery. A current density of some 4 amperes per sq. ft. is then omployed for three to five hours.

Electro-typing has for its object the production of the exact facsimile of any article having an irregular surface, such as an engraved plate, a forme of set-up type, a medal, statue, or hust. In all cases a reversed mould is first obtained, and upon this the coppor is electrolytically deposited to the required thickness. The reversed cast is generally obtained by uso of moulding materials such as gutta-percha, bees'-wax, sealing-wax, etc. copying engraved steel plates, etc., a mixture of the following composition is used: Bees'-wax, Venice turpontine, and plumbago in the proportions of 85, 13, and 2 parts respectively by weight. The method proparing and electro-typing of outlined. The type will now be shortly outlined. The type, after being set up and corrected, is beld in place in a strong wrought-fron chase. The type is made with a fair amount of bevel so that a better impression is given to the wax. All spaces between the letters should be 'type high,' as should also wood blocks, if present. If these are low the 'forme' is 'floated' or filled in with plaster of Parls. The surface of the forme is then thoroughly cleaned with potash solution, followed by water or benzine, and when dry, is Tho wax composition for taking the impression

queriag.

For electro-plating articles with dusted with plumbago. An impresgold or silver, solutions of the double, sion of the 'forme' in the wax is

then made by means of either a good conductors of heat and elechydraulio or togglo press. When the impression has been made, excess of tracity. Gold, silver, copper, lead, tin, impression has been made, excess of two metals; sulphur, bromine, wax is cut away, and the 'forme' hydrogen, phosphorus, etc., non-M. is raised from the wax vertically. All M., except mercury, are solid, The impression is then carefully and most of them will crystallise, trimmed with bullding tools, and then coated with blacklead. Electrochemical deposition (see Electrochemical then coated with blacklead. Electrochemical deposition (see Electrochemical then coated with blacklead.) Its bydrogen, and are always set, free mould, and then blackleading the surface of the wire. The mould is finally prepared for the bath hy wetting the blacklead with spirits of wine, and then washing with a high pressure rose-jet of water, and all air bubbles removed. It is then placed in the depositing bath, and a current of increased E.M.F. employed at first to obtain a rapid deposition of copper. When the whole surface of the mould is covered whole surface of the mould is covered whole surface of the moduli is reduced. The metal is then deposited evenly over the plate until a thickness of $\tau_{b\tau}$ in. up to $\tau_{b\tau}$ in. is obtained. This metal shell so formed is released metal shell so formed is released. metal shell so formed is released from the wax by flooding the back with hot water. Any wax which still adheres is removed by potash solution, and the shell is then swilled and dried. It is then backed, using sal-ammoniae as a flux, with a backing metal at 600° F. (The hacking metal at 600° F. (The hacking metal seen antimony, and 4 per cent. tin.) After cooling, with a polished hammer, the excess of backing metal is shaved off, made perfectly straight and of the required perfectly straight and of the required thlokness. After finally bevolling at the edges it is mounted on wood, type-high. See also ELECTRO-CHEMISTRY following and the McMillan's Electro-Metalworks: lurgy (1889); Kershaw's Electro-Metallurgy (1906); Roberts-Austen's Introduction to Metallurgy (1910); Borcher's and McMillan's Electric Smelling and Refining (1904); Huntingdon's Metals, eto.

Metals. By reason of certain properties, mainly physical, which are common to a targe number of the elements and more or less absent in others, the elements are divided into two classes—metals and non-metals. From earliest days M. have been distinguished from all other been distinguished from all other substances by their peculiar properties, and applied to useful purposes. In the earliest history we have records of the use of the sevon M., gold, silver,

then coated with magnetic trical connection is made by embedding a framework of warm copperwire round the wax edge of the wire. The mould is finally prepared for the bath by wetting the blacklead with spirits of wine, and then washing with a high pressure rose-jet of water, and lar bubbles removed. It is then placed in the depositing bath, and they connected the depositing bath, and they were placed in the depositing bath, and tarty, while some, e.g. sodium, are iarly, while some, e.g. sodium, are very soft, most of them are hard. Some, like antimony, are quite while others, brittle, like iron, possess great tenacity. The two classes of M. and non-M. merge into one another, and certain elements are piaced sometimes in one class and sometimes in the other, according as the distinction is based on physical or chemical properties. Arsenic, for example, possesses many of the physical properties of a M., but in its chemical reactions it is more nearly allied to the non-M. Such elements as these are known as metallolds. The chief chemical properties of M. includo their strong affinity for certain nonmetallic elements, e.g. sulphur, chlorine, and oxygen, with which they form sulphides, chlorides and oxides. The metallic oxides are solid white or coloured bodies with an earthy ap-pearance, and it is only such metallic oxides which give rise to hydroxides when united with water. Such oxides are known as basic or salt forming. oxides. The lower oxides form salts (q.v.) in combination with the oxyacids. M. will, when fused, enter into combination with each other, forming alloys (q.v.). Because of their ing alloys (a.v.). Because of their strong affinity for other elements, M. are generally found combined with other elements, and consequently they have to be extracted from their they have to be extracted from their ores by processes described under METALLURGY. The M. may be classified into (1) Lught METALS: (a) alkali metals, e.g. potassium; (b) alkaline earth metals, e.g. calcium; (c) earthy metals, e.g. aluminium; and (2) HEAVY METALS: (a) metals whose oxides form strong bases, e.g. fron; (b) those whose oxides form weak bases are acide as a Proping and (c) mosts or acids, e.g. arsenic; and (c) noble metals, e.g. gold. Another method of classification adopted more generally The M. are usually opaque, their smooth surfaces reflect light to a high degree, giving them the property (Remistrary). Under this system the known as metallic justre; they are M., taking only the commoner ones,

sodium, and lithium; (2) the alkaline earths, calcium, strontinm, barium; (3) the magnesium group, beryllium, magnesium, zinc, cadmium, mercury; (4) the aluminium group, aluminium, gallium, iridium, thallium, and the gadolinite earths (didymium, yttrium lanthanum, erbium, senndium); (5) the noble metals, copper, silver, and gold, and the platinum M. (ruthenium, rhodium, palladium, osmium, iridium, and platinum); (6) the iron group, iron, cobalt, and niekel; (7) manganese: (8) the chromium group, chromium, molybdenum, tungsten, and uranium; (9) the tin group, germanium, tin, lead, and titanium, zirconium, cerium, and thorium; zirconium, cerium, and thorium; and (10) the arsenic group, arsenio, antimony, bismuth, an vanadium, niobium, and tantalum. See list of words eited under CHEMISTRY. Sec also ATOMIC THEORY, ELEMENTS, and ALLOYS.

Metamorphism. Both aqueous and lgneous rocks after their original

Rocks slightly heat, and pressure. modified, and which retain most of their original features, are called 'altered rocks,' while those whose original characteristics have been wholly disguised or obliterated are designated metamorphic rocks. The M. of sedimentary rocks by water is Illustrated by the formation of glassy quartzite from loose sandstones by silica deposited in the interstlees from percolating waters. The effect of heat in modifying the physical characters of stratified deposits is to be observed around the margins of intruded dykes, slils, and bosses. Thus clays and shales are baked to porcellanite and lydian-stones, sandstones are changed to quartzites, and Ilmestones are marmorised. Around granite bosses an 'aureole' of 'contact metamorphism' can be seen. In the surrounding rocks Around granite bosses an new minerals are developed, such as chlastolite, mica, and garnot, and the M. decreases in intensity, zone by zone, as we pass outwards from the margin of the boss. The nurcoles of the granite bosses of Gallowny are 2 m. in breadth, and show a gradatlon unaltered greywackes from been subjected to pressure and crushling by crust-creep (dynamo-metamorphism), we have areas of 'reglonal' M. The original structural
features are often obliterated and crushline by crust-creep (dynamo-metamorphism), we have areas of 'reglonal' M. The original structural
features are often obliterated and crushline appeal to the primary emotion of all the very raison d'ilre
increase. structures developed, such as when argillaceons rocks are contorted and eleaved into slates. The action of

would be divided into: (1) The al-crust-creep on strata of alternately kalles, potassium, rubidium, casium, soft and hard bands gives rise to erush-brecelas and erush-coaglomerates. The pre-Cambrian fundamental gneisses and schists were held to be original deposits from a primeval ocean. It is now, however, generally admitted that the sehistose structures of these foliated rocks are not of necessity primary, but may be secondary structures due to deformation. majority of the foliated rocks in areas of regional M. appear to be of pre-Cambrian age, but many have re-ceived their foliated structures in post-Archæan times.

Many types of Metamorphosis. animal life undergo change of structure and form in the course of their life history. The most familiar last stances of M. are the Insectivora in which whic* teristic. Tho es from the c growth turns which inter the perfect insect emerges. The liver fluke passes through seven distinct stages, more than one of which have the power of reproduction. The first stage of the cel was long regarded as a distinct species, as, too, was the Azolotl, which under certain conditions changes to a terrestrial salamander, Amblystoma. Though com-mon in most of the lower forms of animal life and in the ninphiblans, so far as vertebrates are concerned, M. is unknown in birds and mammals.

Metaphor (Gk. μεταφορά, from μεταφίρει», to carry over), a figure of speech by which an attribute or name is given to an object which is not literally applicable to it, e.g. ia Lamb's Essays of Elia the phrase, 'n healthy book,' occurs, or again a ship is frequently spoken of as 'ploughing the waves.' Thus a M. Is really a comparison implied but not formally expressed, and in this it differs from the simile, which is a formal comparison.

Metaphysical Poets. The title M. P. was given by Dryden to that school of poetry of which Donne was the founder and most illustrious example. and Cowley the next best known follower. The fault of this school is the vain attempt to use lyric poetry as a vohicle for the expression of all manner of subjective or reflective ideas, and hence to subordinate to

Metaphysics, a name originally

futility of

applied to those books of Aristotlo kind, but tills the soil for the land-which followed his *Physics*, and which lowner on condition of receiving half his editors called the book after the (hence the name from Low Lat. https://urra va coveral. It physics' (μετὰ τὰ φυσικά). It times the word has been applied. With the German.

science purely speculative, and the two-thirds uncreef; while the landobjects of this science are superlord furnishes the whole or part of the
sensual ideas, unattainable by exstock, tools, and implements of hussensial ideas, inattainante by ex-stock, tools, and implements of inappercience. The very possibility of a bandry. It is thus a form of partner-science beyond experience has been ship, in which the laudowner plays denicd by numerous philosophers, and the part of a dormant or sleeping many works called metaphysical partner, but whether it is really so should rather he termed inquiries advantageous a system to the active into the possibility of M. Thus Kant's celebrated work, the Critik der reinen possibility of a theoretical science of things beyond experience, which terminates with a denial of such possibility, and hence some modern philosophers have considered Kant as no metaphysician, but as a critic of the mental faculties, whose labours were to be the precursors of a new system of speculation. Those who dony the possibility of M. deny even the right to assume any axioms as applicable to a sphere beyond experience; and those who did assume them, as Spinoza, Leihnltz, and Wolf, were called by the Kantians dogmatists, in opposition to their own appellation of critics. In England, the word M. is usually applied to denote the philosophy of mind. This science treats of the association of ideas, memory, and various phenomena of mind. Metastasio (originally Trapassi),

Pletro Antonio Domenico Bonaventura (1698-1782), became court-poet in Vlenna under Charles VI. In 1730. He is famous as a librettist through his association with Mozart (q.v.), who composed La Clemenza di Tito to a 'book' by M. Other composers who availed themselves of his writings were Handel, Porpora, Scarlatti, Paër, Hasse, Gluck, Relssiger, Jom-melli, Spontini, and Cimarosa. M.'s poetry was fluent and rich rather than dramatic; and the absence of strong climax would have been fatal in an age whose composers studied declamation and prosody, apart from the higher ideals of opera. His chief efforts were: Didone abbandonala, Catone in Utica, Ezio, Olimpiade,

and La Clemenza di Tito.

Metauro, a riv. of Central Italy, which rises in the Apennines and flowing N.E. enters the Adriatic Sca, 10 m. S.E. of Pesaro. Length, 68 m. Metayer System, a system of land

oultivation in vogue, principally in France and Italy, which has been evolved mainly by compulsion of

in its turn derived from

its produce or some in (in Italy usually advantageous a system to the active partner or cultivator as that of a true peasant proprietorship-to which it Vernunft, is a mere inquiry into the is in some ways analogous-depends on the force of custom to guarantee Its permanence. A true peasant proprictor has the strongest of incentives to make his holding a success; but the quasi-partnership of mctayage can, strictly speaking, be dissolved at will by the landowner, or, what amounts to the same thing, be rendered impracticable by a perfectly legal augmentation of demands on the part of the dormant partner. On the other hand, as Mill points out, local usago is almost everywhere too strong to allow a landowner to in-crease his demands beyond those of his neighbours, and indeed, that very constancy of the basis of division of profits results in the elimination of competition among the cultivators. For a high appreciation of the merits of the system consult Mill's Principles of Political Economy, ch. viii., and Sismondi's New Principles of Political

Economy, Bk. iii.
Metazoa. The animal kingdom is broadly divided into two main sections, the Protozoa and the M. former are typically unicellular, though they in many cases exist in colonies; Ms. are multicellular, and include all the higher forms of animal life. The place of sponges in this classification was long disputed. They are now considered to he definitely

Metazoic.

Metchnikov, Elias (b. 1845), a Rusbacteriologist, born in the bov gov. In 1870 he was apsian Kharkov gov. pointed professor Odessa, and later he became director of the Odessa bacteriological institute. He went to Paris in 1890 and studied under Pasteur, and four years later became professor at the Pasteur Institute, Paris. He is a member of the Académie de Médecinc, forcign member of the Royal Society of London, and of the Académie des Sciences, France and Italy, which has been awarded the Nobel cvolved mainly by compulsion of Prize for medicine. His views are excircumstances as a result of the decay pounded in his Immunity in Informatic parameters are supported in the prize for medicine. His views are excircumstances as a result of the decay pounded in his Immunity in Informatic parameters are supported in the property of the property

Q.

B.C., when he defeated the Cartha-his colleague, and they trimphed ginians in Siolly at Panormus; consultogether of the end of the war. a second time in 249; and afterwards pontifex maximus; while holding the latter dignity he rescued tho Palladium when the temple of Vesta was Q. Cacilius Metellus Pius Scipio on fire, and jost his sight in consequence.

Q. Cacilius Metellus Macedonicus. When he was prator (148 B.C.) ho was sent into Moccdonia against Andris-eus, who pretended to be a son of Persous, and defeated and took him Persous, and deteated and took num-prisoner. In 146 B.C. he defeated the Achwans near Thermopyle, and on his return to Rome obtained a triumph and the surname Macedonia-eus for his conquest of Macedonia. Meteius, in his consuiship (143 B.C.), was sent into Spain, where he re-mained two years, and gained several ristories: but was succeeded in the victories; hut was succeeded in the command before the conclusion of the command before the conclusion of the wor by Q. Pompcius. Pliny cites L. Cacilius Metellus, brother of the Metellus as an extraordinary example last, practor 71 B.C., and as propretor of luman hoppiness. For hesides the successor of Verres in the governthe possession of the highest dig-nities, says Pliny, and having ob-tained a surname from the conquest of Macedonia, he was earried to the funeral pile by four sons, of whom one hod heen prætor, three had heen eonsuls, two had enjoyed a triumph, and one had been eensor' (Hist. Nat., vli. 45).

Cacilius Metellus Numidicus, eonsul 109 B.C., carried on the war against Jugurtha in Numidio with great success, and received in consequence the surnome of Numidicus. In 107 he was superseded in the command hy Marius. In 102 he was censor, during which office he expedied Servillus Giaucia and Appuleius Saturninus from the senate, and two years afterwards (100) he was ban-ished from Romo through the in-trigues of his enemies Marius and Saturninus, who had returned to tho senote. He was, however, recalled in the following year (99), but was pro-bably poisoned shortly after his re-turn. Metellus was one of the chief lcoders of the aristocrotical party. and a man of unsullied choracter.

Cacilius Metellus Pius, son of the preceding, received the surname of Pius on account of the love which he Plus on account of the love which he disployed for his father when he he-sought the people to recall him from banishment in 99. He was preter 89 B.C., and one of the commanders in the Marsic or Socioi War. He subsequently fought as one of Sulla's generals against the Marion porty,

Nature of Man; Optimistic Essays, and was consul with Sulla himself in and monographs on Insects, Scorptons, 80 s.c. In the following yeer (79), centinedes. Sponges, Worms, etc. Metellus, a distinguished pieheian where he carried on the wor against family of the Cecilia gens at Rome:

L. Cacelius Metellus, consul 251

B.c., when he defeated the Carthalis, colleague, and they trinmphed

Q. Cacilius Metellus Pius Scipio was the sen of P. Scipio Nasica, prætor 94. Pompoy married Cornelia, the daughter of Metellus Scipio, in 52 B.C., and in the same year made his fother-in-iaw his colleogue in the eonsulship. Scipio fought on the side of Pompoy in the Civil War, and after the battic of Pharsallo, crossed over to Africa, where he received the command of the Pompeian troops. He was defeated by Casar at the battle of Thapsus in 46; and shortly afterwards he put an end to his own life.

Q. Cacilius Metellus Creticus, consul 69 B.C., carried on war against Crete, which ho subdued in the course

ment of Sieily.

Quintus Cacilius Metellus Celer was prætor in 63 B.c., when he com-manded three legions in the war against Catiline, whom he prevented from crossing the Apennines and so crossing into Gaul. He became consui in 60 B.C., in which capacity he opposed Pompey and the aristocratic party, especially in the matter of the Agrarion lows. He died in 59 B.C.

Metempsychosis, see TRANSMICRA-

Meteoritic Hypothesis. Sir N. Lock-yor, in a work ontitled The Meteorilic Hypothesis, 1890, has endeavoured to show that nobulæ ore composed of sporsoly aggregated swarms of meteorites, and that stellar systems are evolved from them. The light emitted hy nebulm is assigned to the collision of the meteorites with one another, the aggregate result of many collisions affording a constant emana; tion of light. The theory being based on spectroscopio evidence, it remains to he exploined why the spectra of these nebulæ novor show metals, but

Meteorograph, an instrument which gives a continuous record of the finctuotions in the temperature, pres-sure, and humidity of the atmosphere. The instrument consists of a combined thermograph, borograph, and hydrograph, ond lines are plotted on a cylinder which, driven by clock. work, revolves once in about cight hours. Made of aluminium ond en-

only hydrogen, helinm, and nebulium.

closed in a cage, the whole apparatus astronomical as well as to atmosonly weighs about 30 to 40 ozs., and pherical phenomena. is attached, for use, about 60 ft. below a k ord prevalling nt-

mosphere is obtained Meteorological Office, The, deals with the meteorology of the British Isles, and also of some of the colonles and dependencies. It issues forecasts of weather from the London office, which are based on telegraphic information obtained from about sixty stations in the British Isles, on the continent, and some islands in the Atlantic. First established in 1854 under the Board of Trade, it is now under a director and committee ap-

pointed by the treasury, and receives a parliamentary voto of £15,300.

Meteorological Society. The first English society was founded in 1823 and was followed by the Metcorological Society of London which existed from 1836-12. The British Meteoro-logical Society was initiated in 1850, and assumed its present designation as Royal Meteorological Society in 1882. Observations are made at numerous stations in the British Isles, and the statistical data obtained are published in the Meteorological Record. Other publications of the society are y Journal,

tre of three in which extensivo meteorological observations are made, either by self-recording in-struments or by hourly readings; (2) Stations where complete regular (2) Stations where complete regular observations of climatic elements are conducted; (3) stations where only a portion of these elements are observed. There are about 160 stations of the second order in Great Britain, where observations are made twice a day, viz. 9 a.m. and 9 p.m.
The instruments used comprise a
barometer. barometer, mum and

enclosed in a of stations in the British Isles observed equator on March 21, when he is going only once a day, while about 4000 northwards, and attains his greatest places are provided with rain gauges. In Russla, stations of the second June 21. On Sept. 22 he appears on order take observations three times the equator when going southwards, a day, at 7 a.m., 1 p.m., and 9 p.m., and attains his greatest southern dewhile in Austria the system demands observations at 6 a.m., 2 p.m., and observations at 6 a.m., 2 p.m., and the sun is on the equator we have 10 p.m. On the whole globant 380 first, 2620 second, an third order stations, while observations alone are taken at tudes, which also determines the about 20.000 stations.

about 20,000 stations.

Anglo at which tho sun's rays strike
Meteorology, tho science of the the earth. Tho snn's heat-rays come
atmosphere. The term was first used
to us in straight lines and strike on
by Plato, and bad reference to the hemisphere which faces tho sun.

pherical phenomena. Although the subject has been more or less systematically studied since the time of Aristotle, who wrote the first treatise on it, little progress was made until the invention of the harometer and thermometer. Gailleo invented the thermometer. Galileo Invented the thermometer in 1592, and his pupil, Torricolli, in 1643 discovered the principle of the barometer. The mcrcurial thermometer was introduced by Fahrenheit in 1714, and more accurate observations could then be made. M. may be considered from three points of view: (1) The com-parison of systematic observations taken at various stations leads to deductions regarding the relative fitness of different countries for the support of animal and vegetable life. From this point of view, the domain of medical climatology, the subject has been most studied. (2) Of late years, owing to the development of telegraphy, the subject has been telegraphy, the subject has been treated as the science of the weather. From observations of the tempera-From observations of the temperature, pressure, direction, and motion of the wind, etc., taken at a number of stations, meteorologists are able to forceast for a few hours the course of the weather. (3) In the investigation of the physical conditions of the atmosphere and their relations to the forces of light, heat, electricity, and magnetism, we have the highest object of M., considered as a department of cosmical physics. There are two main groups of meteorological two main groups of meteorological phenomena: (1) Those produced by the diurnal rotation of the earth on its axis, and (2) those which depend on the revolution of the earth round the sun, i.e. scasonal changes. It is, however, the apparent motion of tho sun which exerts the greatest influence in producing meteorological changes. The apparent path of the sun in the sky describes a circle, the
f which cuts the plane of the
at an angle of 231. These
intersect each other in two

shine recorder, an anemometer, and points diametrically opposite each a rain gauge. A considerable number other. The sun appears on the of stations in the British Isles observe equator on March 21, when he is going other. The sun appears on the equator on March 21, when he is going

trated upon an area which varies with the sine of the sun's altitude at the moment, this variability in-creasing with the distance from the equator. Again, in the passage of the sun's rays through the atmosphere, the loss of heat hy absorption is more than 20 per cent. on a vertical and almost all on a nearly horizontal beam, i.e. at the poles, where the solar beams are almost horizontal, nearly all the solar heat is intercepted by the dense, lower strata of the atmo-sphere. On the whole, about one quarter of the heat which reaches the outer limit of the atmosphere is iost before it reaches sea-level. The converse to solar radiation is the terrestrial radiation. The escape of heat from the earth into space is affected by the latitude, and also by the nature of the covering with which the earth is provided. The great the earth is provided. The great secondary agencies, which modify the effect of the sun's heat, are the ocean currents and the prevailing As an example, we may cite the effect of the Gulf Stream on the climate of N.W. Europe. This stream, flowing from the Gulf of Mexico Into the Atlantic, makes its influence felt even within the Arctic Circle by keepiag the harbour of Hammerfest in 71° N. open in the depth of winter. The rigorons climate of Labrador, more than 20° farther S., is due to the American Arctic current which skirts the coast. In the Pacific, the Kuro-Siwo warm current of the Japanese coast has the effect of freeing the shores of Alaska and British Columhia from ice in winter. The prevalling W. winds of our own country hrlag warmth and moisture from the sea in winter, and carry the benefits of the uearness to the sea to the inland portions of the British Isles. The coaditions which affect climate are fairly simple in the tropics, but in Europe are most intricate. There is Europe are most intricate. There is no regularity in the distribution of rainfall, etc., over Europe, but in the tropies there exist the 'wet' and ' dry 'seasons. The permaneat winds are the 'trades' and 'aati-trades. The former hiow more or less steadily in a N.E. or S.E. d to the hemispheres. are westerly winds, them southing in them southing in them the periodical winds are the months and hence we find that the distribution of rain over any country is scons. From October to April the gracity dependent upon its surface with clear weather, crosses the line, and blows as the N.W. mensoon, bringing sultry weather with torrents of rain. From April to October the of sun-spots which show a cycle of are westerly wiads,

The heating power of any cylindrical S.E. trade blows to the equator, and beam on any horizontal portion of crossing to the N. of it hecomes the the earth's surface, will be concensive. S.W. monsoon, with rain. In both S.W. monsoon, with rain. In both cases it is the wind blowing from the equator which brings the rain, hence, in India, the time of the N.W. monsoon is a dry period, while the wet season is the period of the S.W. monsoon.

Diurnal phenomena.—If we ex-coatinuous temperature amiae curve, we observe that there is a gradual riso of temperature during the forenoon, culminating in a maximum, and then a regular fall. course of the curve varies from day to day, the variation helag greatest in summer, while cloudy days show little variation of the curve. The diurnal range of temperature is generally small at coast stations generally small at coast stations owing to the large amount of water vapour in the air, while the range is usually greatest in elevated inland districts where the atmosphere is dry. A curvo of the diurnal range of temperature averaged over twenty years at Greenwich shows a gradual rise of temperature up to a maximum at 2 p.m., and then a decrease to a minimum at 4 a.m. The curve of diurnal variation of the barometer is of less importance than the correspoading curve for the thermometer. The chauges in pressure in the British Isies averages about '02 iu. In the Torrid zone, however, the curves of daily variation are a striking feature. The ordinary type of curve exhibits two maxima which occur at about 9 a.m. and 9 p.m., and two minima at about 3 a.m. and 3 p.m. The difference between the extreme oscillations is called the diurnal range, which is generally over the in. In the tropics (116 in. at Calcutta) but is far less in high latitudes (012 St. Petersburg). In Europo the results of hourly records of the rainfail show three maxima and three minima in hours, absolute twenty-four tiıo maximum occurring at about 2 or 3 o'clock in the afternoon. The diurnal period of the wind in regard to its velocity is similar to that of the temperature, reaching a minimum about sunrise and a maximum in the afternoou between noon and 2 p.m. The physical cause of rala is the control of warm air which is charged noisture. This may be accombly contact with the cold surface.

that period.

Magazine.

Meteors, or Shooting Stars, consist of small portions of matter which, on entering the earth's atmosphere from outer space, become incan-descent owing to friction caused by their high velocity (sometimes reaching 40 m. a second). Some of these small bodies are found after their fall and may weigh a few pounds, but more usually M. are entirely dissipated into a fine dust. Those which survivo complete disruption are found to contain iron, nickel, carbon, and other known terrestrial elements. On any clear night after a few minutes' watching, the ohappear to come f quarter of the sky. known as the rac

periodicity of me due to the fact th ticles of matter w subject to the 1 gravitation and revolve round the products. sun in elliptical orbits in the same manner as do the planots. Whenever, therefore, the earth in its revolution intersects the orbit of the meteoric stream, there must occur a display of shooting stars, and as it occasionally happens that the earth passes through the nucleus of the stream, the display is then exceedingly brilliant. Chief among such periodic brilliant displays are the Leonids which occur about overy thirty-three years on Nov. 13 or 14 (the last in 1899), though at that date every year a considerable number of M. are Other important to be met with. meteorie systems are the Andromeids, in August, and the Perseids. There seems to be much evidence that comets are made up of a loose collection of M. which have been reduced to a gaseous condition owing to their

American Lec.

near approach to the sun.

See text-books on simplest hydrocarbon of the paraffin series. It is produced in nature by the decay of vegetable matter under water, and thus rises in bubbles from marshes and swamps. It also occurs in the natural gas of petroleum districts, is set free from fissures in coal as 'fire damp,' and is one of the whole constituents, feet, chief constituents of coal gas. It is prepared by heating a mixture of sodium acetate and soda lime, according to the equation: C₂H₂O₂Na+ NaOH = CH₄ + Na₂CO₂. M. is a colourless, tasteless gas, which is liquefied at -11° C. under a pressure of 180 atmospheres. It hurns with a pale blue flame and forms a highly explosive mixture with certain proportions of air or oxygen, the explosions in coal mines being largely due to the ignition of such a mixture. It is almost insoluble in water, more a few minutes' watching, the oh- soluble in alcohol, and is a very server will see a shooting star, but at stable gas, resisting the action of a certain times in the year a large large number of reagents. When number of M. may be observed which mixed with chlorine in the dark, an

surs, but on exposuro to in explosion occurs and icposited. In diffused sunexplosion occurs, but the atoms are displaced by quantities of chlorine, formation of substitution

Methil, a scaport of W. Fifeshire, Scotland, on the N. shore of the Firth of Forth, and 1 m. S.W. of Leven. A new dock was opened in

Leven. A new dock was opened in 1911. Pop. (1911) 11,000.

Methley, a tn. in Yorkshire, England, 7 m. S.E. of Leeds. Has coal mines near. Pop. (1911) 4330.

Methodism (Gk. μέθοδος, rule). a

term applied to a religious organisa-tion which owes its origin to John and Charles Wesley. The name 'Methodists' was given to certain Oxford students who, with the brothers Wesley, met together at fixed times to acquire regular habits of religious study and prayer. When John Wesley left Oxford he gave up his life to spread Seriptural holiness over the land. He and his fellow evangelists were repudiated by the Church of England, and not being able to preach in Anglican churches, they adopted the plan of preaching near approach to the sun. Metford, William Ellis (1824-99), they adopted the plan of preaching an English inventor, born at Taun-in the open air. As the numbers of ton, Somerset, and educated at his followers increased, Wesley ortanised them into societies, the 'societies, Apprenticed to a ganised them into 'societies,' the 856 he was elected first of which was formed in 1739. Sherhorne School. Apprenticed to a ganised them into 'societies,' the eivil engineer, in 1856 he was elected first of which was formed in 1739. an associate of the Institution of Civil Engineers. He was greatly invented a hollow-based bullet for the Edinburgh rifle, expanding minus a plug, and in 1888 produced tho Lecture of a desired the second of the come and he saved from their sins, may become a member of a classmay become a member of a class-Methane, or Marsh Gas (CH₄), the meeting, by which act he is enrolled

as a member of the Church. No one can be a member of the Mothodist Church without having his name down on a 'class-book,' though attempts have been made during the last few years to alter this rule. The last few years to alter this rule. The classes meet weekly for the purposes of Christian fellowship under the superintendence of a 'leader.' Each church has its stewards, whose duties partly religious andpartly financial. A circuit quarterly meeting is also held, formed of representatives from different churches or chapels in the neighbourhood, which together make up a 'circuit'. A minister is invited to a church by the quarterly meeting. His invitation is for one year at a time, but is usually renewed until he has remained in the circuit for three years. According to the legal constitution declared by the Conference of 1784, he cannot remain in one circuit for more than three years, but there is a general conviction in the church that the term should be extended, and it is not uncommon now for a minister to receive permission from Conference to remain in a circuit for four, fivo, or even slx years. Besides ordained traveiling ministers, there are 'travelling' ministers, there are local preachers.' These are laymen who offer voluntary services on Sunday, and after passing certain examinations are then enrolled as They are of particular preachers. benefit in country circults where ministers cannot be provided for every little chapel. The whole con-nection is governed by an annual assembly, held in different towns of the United Kingdom, known as the Conference. Down to the year 1784 it was a select ministerial council, presided over by John Wesley. In that year its rights were defined, and it was given specific control over the ministers and churches throughout the Connection. In 1878 by repre-sentatives were introduced into Conference, and in 1911 women were admitted under the same rules as laymen. Questions regarding the various interests of the church are discussed, and what has been done in the general Conference is aftersubmitted to the wards Legal Hundred, a body of one hundred ministers cleeted for life by the Con-There are four theological colleges for the training of ministers, at Richmond, Headingley, Didsbury, and Handsworth, and two schools formed. The various Methodist for the children of Wesloyan ministers seeleties of Canada united into one —Trinity Hall, Southport, for girls, church in 1833. The various Methodand Kingswood School, The Wesleyan boys. Church does much miss .

No one 1913. The National Children's Home othodist and Orphanago is under the superintendence of the Conference. Methodist Book-Room in City Road, London, issues a number of tracts, papers, and religious publications. Tho chief papers of the Society are the London Quarterly Review, Wes-leyan Methodist Magazine, Methodist Recorder, and Methodist Times. In England there have been many

sceessions from the Church, as was inovitable. The Methodist New Con-nection was formed in 1797 under the leadership of Alexander Kiliam, who, in his pamphlet, The Progress of Liberty (1795), asked for more power for laymen and less for the ministers. In 1907 this body amalgamated with the United Methodist Free Churches (established 1857) under the name of the United Methodist Church. Another soliism took place in 1812, through the expulsion of Hugh Bourne and William Clowes, who, in spite of the expressed wish of Conference, persisted in holding open-air rovival moetings. They consequently organised an independent church, called the Primitive Methodist Connection, which held its first con-ference in 1820. The Protestant Methodists formed themselves into a separate body as a protest against placing an organ in the Brunswick Wesleyan Mothodist Church (1828). The Bible Christians or Bryaniles found the restrictions of Conference irksome in evangelistic work among irksome in evangelistic work among the Cornish miners, and separated from the larger body in 1815. The Welsh Calvinistic Methodists were founded by Whitefield indopendently of the Wesloyan Methodist Church in England. Their church government resembles that of the Presbyterian Church. The Methodist Episcopal Church of the United States, America, originated in the evangelistic work of some Irish lumnigrants, who settled in New York in 1766. It who settled in New York in 1766. It received its first bishop in the Rev. Thomas Coke, who was ordained by John Wesley. Thus the American. unlike the English, Mothodist Church, has the episcopal form of government. The Wesleyan Methodist Connection

of America aroso out of a selism on the question of slavery in 1811. further secession from the Methodist Episcopal Church took place in 1844 on the same issue, when the Methodist Episcopal Church South was formed. The various Methodist and the South

Wesloyans la abroad, and celebrated the centenary 1900-2, forming one Methodism in of its Foreign Missionary Society in the South Pacific.

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Sec Lives of the Wesicys and Whito-field; Wesicy's Works and Journal; Bible, dying at the age of 969 years. George Smith, History of Methodism, 1862; Abel Stevens, History of the Methodists; Rigg, Church Origanisations, 1807, and The Connections, 1807, and The Connectional Economy of Wesleyan Methodism, 1879; Waller, Constitution and Polity of Wesleyan Statistics of Methodism, 1879; Waller, Constitution and Polity of Wesleyan on distilling this oil with dilute from 1970 on distilling this oil with dilute for the monohydric alcohols, occurs in nature in soveral substances, c.g. as methyl salleylate in oil of winter-stitution and Polity of Wesleyan on distilling this oil with dilute Methodism, 1879; Waller, Constitution and Polity of Wesleyan stitution and Pouty of resception Methodism, 1880; Gregory, History of Methodism, 1911; Barolay, Constitution of the Methodist Episcopal Churches in America, 1902; and Atkinson, Centennial History of Atkinson, Centennial Hi American Methodism, 1884.

Methodius, CYRIL SCC AND

METHODIUS.

Methuen, a tn. of Essex co., Massachusetts, U.S.A., 2 m. N.N.W. of Lawrence. Manufs. woollens, cottons, shoes, etc. Pop. (1910)

11,448.
Methuen, Field Marshal Paul Sanford, third Baron, G.C.B., G.C.V.O., C.B., G.M.G. (b. 1845), succeeded Frederick Henry Paul M., the second 1212.011 He was descended baron (1818-91). He was descended from the Lord Chancellor of Ircland, Join M., whose name is associated with a famous treaty with Portugal, was born at Nynehead, Somersot-shire, and educated at Eton. In 1864 he joined the Scots Guards, and was on special service on the Gold Coast in 1872; in 1874 he took part in the Ashanti War. From 1877-81 he was military attaché at Berlin. He took part in the Egyptian War of 1882, being present, at Telel-1882, of 1882, being present at Tel-el-Kebir and Kassassin; he was mentioned in despatches and decorated for his services in the war. He com-manded 'Methuen's Horso' in the Bechuanaland expedition of 1884-85, being made a C.M.G. His promotion to the rank of major-general took place in 1890. During the Boer War of 1899-1902, he was in command of the First Division of the First Army Corps. After defeating the Boers at Belmont, Enslin, and the Modder R., he was taken prisoner in 1902 by Delarer, but released. He was appointed commander-in-chief of the castern command in 1903, and general officer commanding chief of S. Africa in 1907: he 1909 he was made in 1907; in 1909 he was made governor of Natal. Methuen Treaty, a commercial

treaty arranged between England and Portugal in 1703. It was nego-tiated by Paul Methuen, and by it the Portuguese wines were received at a lower duty than those imported from France. It was abandoned in 1836.

Methucalah ·sis, the son (Noah, of

green. On distilling this oil with dilute potash, an aqueous solution of pure M. A. is obtained. It is cluefly prepared from the products of the destructive distillation of wood. The alcohol is obtained by redistilling the crude distillate over lime, finally purifying by the formation of the crystallino caleium chlorido compound or of the oxalio ester, from which it is obtained by distillation with water or with potash. M. A. is a colouriess liquid (sp. gr. 796 at 20° C.); it bolls at 66° C., and has a virous odour and burning taste. It mixes with water in all proportions, and is largely used in the pre-paration of organic dyes and var-nishes, and for the preparation of methylated spirit.

Methylated Spirit contains about 90 per cent. of raw spirit (aqueous cthyi alcohol), about 10 per cent. of crude wood spirit (methyi alcohoi), erude wood spirit (methyl alcohol), and a small quantity of parafin oil, which renders the alcohol unfit for drinking purposes, without affecting to any great extont its value as a solvent. This spirit, under certain restrictions, may be sold duty free for varnish-making, etc., further restrictions being imposed if the mineral oil to omitted.

is omitted.

Metis (Minis), in Greek mythology, was the personification of prudence. She was the daughter of Oceanus and Tethys and the first wife of Zeus, who in fear lest she should give birth to a child more powerful than himself, devoured her in wrath. He afterwards himself gave birth to Athene, who issued from his head.

Metius, Adrian (1571-1635), a Dutch geometrician, born at Alkmaar. He found out a truer relation of the eircumierence of a circle to its diameter, i.e. the value ffs, which bad previously been represented by 2. Among darium perpetuum, 1627.

Metius, James, the brother of Adrian. also a native of Alkmaar. He is said to have invented the refracting telescope in 1609, on the mere report of which invention Galileo constructed his first telescope the following year.

Methovic, a market tn. of Austria, near the Herzegovina fronticr of Dalis matia, on the Narenta R. Pop. 5723. astronomer of ancient Athens. He is famous for having introduced tho metonie cycle, a period of nincteon solar years.

Metope (Gk. μετόπη, a middle space), a term in architecture for that part of the front which is intorposed between two triglyphs in a Dorie frieze.

Metre, see METRIC SYSTEM. Metre, in poetry, is that arrange-ment of syllables in an orderly suceesslon so as to constitute versc. syllables are divided into a number of similar or dissimilar groups, each nf which constitutes a line or verso (Gk. στίχου), and in modern languages the end syllables of these lines are usually related by rime or assonance. lines themselves can be subdivided into feet, each line normally consist-lng of a certain number of these feet regularly repeated. In Greek and regularly repeated. In Greek and Latin verse, M. consisted in n regular succession of long and short syllables, and the verse accent did not usually coincide with the ordinary accent of the word. In English, however, quantity has censed to he definite and definable, and it is upon the accent that M. depends. It is, therefore, with the alternation of seconted and unthe alternation of accented and unaccented syllables that the laws of M. deal. In English each foot is supposed to consist of an accented syllable combined with either one or two unaccented syllables. In this way five kinds of measure are secured. (1) The commonest of feet is the iambus, consisting of one unaccented and one accented, such as the word cstate. (2) The trochee, one accented and one unaccented, as holy. (3) The dactyle (Gk. δάκτυλος, a finger, from its three

back), the dactyl reversed, as in promenade. (5) The amphibrach, an accented syllable between two unaccented, as in appearance. These different feet may be arranged so as to form various kinds of lines. Theoreti-eally each line should consist of a certain number of similar feet, but in practice there is not often this regularity. Freedom in the use of syllabic equivalents makes the verse supple instead of stiff, and its value was clearly understood by so early a poet as Chaucer. The doctrine of 'syllabic equivalents' is, briefly, that two unaccented syllables are equivalent to one accented. Hence, in spite of the conventional demand for an accented syllable in each foot, many a nnc in reality consists only of three un-accented syllables. This great freedom, which is characteristic of the best English verse, makes it difficult and well-nigh impossible to measure 100 square

Meton (Gk. Μέτων) (fl. 432 B.C.), an jour verses by rule of thumb. Much of it could be scanned in many ways, and could be brought within the bounds of no little system. It is possible, how-ever, to speak of certain types of verse, and to show the normal construction to which all the variants are Perhaps the best known related. verse is the iambic pentameter, known as the heroic couplet when each pair of lines is connected by rime, and as blank verse when unrimed. The clegiac is also a decasyllabic measure, but here the rimes are alternate, and the verso is generally divided into stanzas of four lines (c.g. Gray's Elegy). Rime royal, used by Chaucer in several of his minor poems, is written in stanzas of seven iambic pentameter lines riming ababbcc. Octosyl. labics, consisting generally of four lambic feet, are useful for quicker narrative, and were commonly used by Scott and Byron for this purpose. The M. usually known as ballad metre, also very common in hymn tunes of quatrains, consists of lines of cight and six syllables alternately. Anapæsts and trochees are frequently sub-(new edit), 1901. Metric System. This system of

weights and measures was introduced by the French Republic in 1801. Its fundamental unit of length is the metre, which was taken as one tonmillionth part of the distance from the poles to the equator. Recent investigation has shown that this is inaccurate, and the standard is now defined as the length of a bar of an alloy of iridinm and platinum kept la the archives in Paris. It is by far the most practical system, its various units for larger and smaller distances than the metre being multiples and sub-multiples of ton of the metre. Thus, to convert metres into decimetres, it is only necessary to multiply by ten. It is a legal system in Great Britain by Act of parliament (1864), although the Aot has remained practically incorporative. The system is The system is tically inoperative. universally used in scientific investi-

gation. Measures of length.---1 kilometre= 1000 metres; 1 metre=100 eentimetres=1000 millimetres. British equivalent for 1 metre=39.37 1 centimetre= Clearly, then, ·3937 in.

Measures of area .-- As in the Engllsh system they speak of a square foot, so in the M. S. they speak of a square met

denominations

centimetre; centi-10.000 square metrcs=1 square metre; 1 square kilometre=1,000,000 square metres. The British equivalents are: 1 square metre=0.386 sq. m. The denominametre=0.386 sq. m. The denomina-tions 1 hectare=10,000 square metres, 1 are=100 square metres are occasionally used.

Measures of volume.—1 litre=1000 cubic centimetres=1.76 pints; various multiples and submultiples of the

litre being also used.

Measures of mass.—1000 milli-000 grammes

cammc = 15.4= 2.205 lbs. re connected cubic centi-

metre of water at temperature 4° C. weighs 1 gramme, or that 1 litre, i.e. 1 cubic decimetre or 1000 cubic centimetres, weighs 1 kilogramme.

Metronome, an instrument used for determining and securing the movement of musical compositions. It was invented by Maelzel about 1814, and consists essentially of a pendulum of which the point of suspension is between the extremities. The pendulum is driven by a spring and wheel which ticks the oscillations. A movable weight is attached to the pendulum, and an upright scale graduated to correspond with marks on the rod is placed behind. The period of the pendulum's vibration can thus be varied to any required time by adjusting the weight until it is opposite to one of these lines, the mark near the line giving the number of oscillations per minute.

Metropolitan Police. The area under the supervision of the M. P. includes the whole of Middlesex and portions of Kent. Essex, and Surrey, within 15 m. of Charing Cross. Their primary duties are the keeping order in the vicinity of places of public resort, and the apprehension of offenders against the criminal law. They are the authority for regulating the street traffic. especially during public processions and near churches and places of public worship during divine service on Sundays and other They also issue aunual holy days, licences to proprietors, drivers, and conductors of conveyances, enabling omnibuses, carriages, carts, etc., to ply or stand for hire within the metropolitan police district; and they have power to make bylaws for regulating in the establishment of a police office the conduct of all such persons. The M. P. are under the direct control of instices and seven (!) constables. the Home Office, but the City itself altogether in 1797 there were not is policed by the City itself and control of in the metropolis. Accordingly, 200 nonther court records billed. Counc

Metropolitan Police Courts, petty sessional courts presided over by a paid professional magistracy, generally called stipendiaries. Other large towns have such courts as distinct from those of the unpaid magistracy, hut the police court (in the sense in which it is used in this article) originated in London in the early Georgian period when the earlier tentative cfforts to police Westminster were developed by the appointment of con-stables, and 'annoyance juries,' who reported on public nuisances, annoyances, and other small offences. 1792 the crown was given power establish seven public courts in specified metropolitan parishes, and appoint three justices drawn from the Middlesex and Surrey magistracy, for each of such courts. The Act of 1792 was repealed and re-enacted by an Act passed in 1802, and this later Act may be regarded as the real charter of the metropolitan stipendiaries. The seven courts or 'publick offices,' as seven courts or 'pullick offices,' as they were styled, were established at the parishes of St. Margarct, West-minster; St. James, Westminster; St. James, Clerkenwell; St. Leonard, Shoreditch; St. Mary, Whitechapel; and St. Panl, Shadwell (for Middle-sor) and at or pages St. Margarate sox), and at or near St. Margaret's Hill, Southwark (for Surrey). The crown could order salaries of £500 each to the justices, such salaries to be clear of all deductions, provided the aggregate charges, including the aggregate charges, inclinding salaries, attending the maintenance of these publick offices, did not exceed £18,000 annually. The result of this establishment of paid magis-trates in the metropolis was that they enjoyed a monopoly of fees at their public offices within the limits of the Weekly Bills of Mortality, for henceforth, with few exceptions, no fees could he taken by any other justices under a penalty of £100. The excepted cases were, interalia, fees for licensing alchouses, and fees for the purpose of enforcing the payment of taxes and assessments arising within the parish concerned, and generally fees taken at Bow Street Public Office—this cclebrated place heing thus early a central institution. Notwithstanding these changes, the policion of the metropolis left much to be desired. and especially in the vicinity of the Thames. The 'hooliganism' in the neighbourhood of the river resulted

330, another court was established Westminster, and the 'metro-ipolitan police district' constituted,

Poliec

henceforth to be policed by the new police force, who were placed under the direct control of the justices, and superseded the old London watchmen. A later act extended the jurisdiction of the M. P. C. by giving the police constables of the metropolitan force powers in Bucks and Berks, in addition to the metropolitan area properly so called. The M. P. C. now number fourteen: Bow St. with three magistrates, Clerkenwell two, Green-wich and Woolwieh two between them, Lambeth two, Marylebone two, Thames two, Tower Bridge two, Old Street two, Westminster two, W. London two, Marlborough Street two, N. London one, and South Western one. Juvenile courts were established by Order in Council of Dec. 2, 1909, at Bow Street, Clerken-well, Tower Bridgo, Westminster, Old Street, and Greenwiel. Each of the courts has a staff of elerks, office keepers, ushers, and gaolers. empowered is under Metropolitan Police Courts Act. 1839. to alter the number of the courts and magistrates, and under an Act of 1840, to constitute police court divisions with a police court for each, provided only the number of the magistrates do not at any time exceed twenty-seven. The statutory boundaries of the respective districts will be found se

Metropolitan

Kelly's London held every day, Sundays and holidays The salary of the chief execpted. magistrate is now £1800, that of each of the others being £1500. Bow Street has the distinction of being the only eourt having jurisdiction in extradi-tion cases. Everything which can be said to relate to public order or the provention of nuisances comes within the general jurisdiction of the M. P. C. further information consult Wood Renton's Encyclopædia of the Laws of England, and Archibald's Metropolitan Police Guide.

Metropolitan Water Board, the body responsible for the water supply to the administrative county of London, a duty which was formerly left to the initiative of the various metropolitan water companies. The Board, as constituted by the provisions of the Mct-ropolis Water Act, 1902, is composed of 66 members, 14 of whom are ap-pointed by the London County Council, two by the Common Council of the City, two by the City Council of the borough of Westminster, one each of the remaining metropolitan borough councils, and the re-

the component parishes of which were within the metropolitan water area. In 1907, the debt of the M. W. B., which consisted mainly of the com-pensation payable to the extinct water companies, and the debenture to the Board with the rest of the assets or liabilities, was £47,415,652. During the years 1905-6 the average daily supply of water by the Board was upwards of 220,000,000 gallons, giving an average of 32 gallons per head of a total population of nearly 7,000,000. London has not yet derived any benefit from the purchase of these water companies, but future legislatures may devise some means of ridding the state of the burden imposed by water stock, as e.g. by converting it into terminable annuities a policy which would at once result in a reduction of price. See also MUNICIPAL TRADE,

Metrosideros, a genus of evergreen shrubs or trees (order Myrtaceæ). The wood is hard and heavy, and is

utilised in New Zealand. Metsu (or Metzu), Gabriel (1630-67) a Dutch painter, born at Leyden. He studied under Gerard Dow, and in 1648 was admitted into the Painters Guild at Leyden, but left that eity two years later for Amsterdam, where he settled as a painter of genre pictures. His chief works are: tures. His enier works are; and Market-place of Amsterdam, at the Louvre; 'The Sportsman,' at the Hague; 'The Game-Dealer's Shop,' at Dresden; 'The Repast,' at the Hermitage, St. Petersburg; and 'The Duet' and 'The Music Lesson,' in the National Gallery, London.

Meternich - Winnshurg. Clemens

Metternich - Winnsburg, Clemens Wenzel Nspomuk Lothar, Duke of Portella, and later Princs von Metter-nich (1773-1859), born at Coblenz, his father being the famous Austrian statesman, Franz Georg Karl von Metternieh-Winneburg. In 1795 he married the daughter of Prince Kaunitz, and henceforward assumed a prominent position in the diplomatic world. He became minister at Dresden in 1801, and two years later was transferred to Berlin. During the years 1806-7 he represented Austria years 1806-7 he represented Austria at Paris, where, in spite of his anti-Napoleonio policy, he managed to keep on good terms with Napoleon, whom he tried to bring into an alliance with Austria. The war which lollowed was terminated by Napoleon's victory at Wagram and the Treaty of Vienna (1809). After this Metternich became Chancellor and Foreign nich beeame Chaneellor and Foreign Minister. For some time he veiled his enmity against Napoleon, and succeeded in negotiating the marriage mainder by the local authorities of between that emperor and Maria those districts which, though outside Louise in 1810. But during the next those districts which, though outside Louise in 1810. But during the next the county of London, are included two years the attitude and the successes of Napoleon led to the forma- but after a long residence in England tion of the great alliance between went to Rome in 1801, where he speut Prosis Austria and Branch in which, the rest of his life. His works, which Metternich were executed in the chalk manner adding posi-

ading posivictory of

Leipzig enabled him to dictate terms to Napoleon, and he took a leading to Napoleon, and ho took a leading part in the negotiations which followed this event. From this date Metternieh figures as the champion of Conservatism throughout Europe, the opponent of every attempt to change the established order. By his distate of Hidalgo, 40 m. N. of Pachuca. the established order. By his di-plomacy he again managed to secure the leading position in the Holy Alliance, which he used as an instru-ment for furthering these aims. The Revolution of 1848 came as a great shock to him, and its results were seen in Austria in the fall of Metternich's government. He left Austria with an armed escort, and took refuge in England. In 1851 he removed to his castle of Johannisburg on the Rhiue. He died at Vienna in 1859. His Memoirs were published at Vienna (1878-84), and were speedily translated into German and English. at ranslated into German and English. See also works by Beer, Zehn Jahre österreichischer Politik, 1801-10, 1877, etc.; A. Sorel, L'Europe et la révolution française, and biographies by F. yon Demelitsch and H. Welschinger. Mettmann, a tn. of Prussia in the Rhine prov., about 8 m. N.E. of Düsseldorf. In the vicinity the

Düsseldorf. In the vicinity the

Meander Cave, containing the remains of a prehistoric human being, was liscovered. Pop. 10,762.
Metz, a tn. and fortress of Gernany, in Alsace-Lorraine, 33 m. N. of Saney. It is situated on the Moselle it its confluence with the Seille, and s surrounded by a system of fortificaions. Its streets are wide and elean, and it contains numerous spacious quares. The eathedral, a Gothie edifiee, was begun in 1014, and lnished in 1546. The church of Notre-Dame-de-la-Rondc is a noteworthy structure. Its choir was built n 1130. In the eemetery of Champière there is a memorial to the 8400 Frenchmen who fell in the war of 1870. Its industry is active, the chief imployments being lace-making, tanding, emproidering, and there is trade in corn, poultry, fruit, and wine; there are also brass and copper foundries. M., known to the Romans by the name of Divodurum, was the chief town of a people called the Mediomatrici, whose name it took at a later date. In the 5th eentury, the cor-rupted form Mettis first came into use, whence the modern M. It surrendered to the Germans in 1870.

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of the nis best Judg-

Pop. 8000.

Meudon, a tn. and S.W. suburb of Paris, France, in the dept. of Seine-et-

Oise. It manufs, glass, ammunition, and linen goods. Pop. 10,500.

Meulebeke, an industrial to near Courtrai. Belgium, in the prov. of W. Flanders, with manufs, of lace and textiles. Pop. 9900.

Meulen, Adam François van der (1632-90), a Flemish painter, born in Brussels. He was a pupil of Peter Snayers, but soon surpassed his Snayers, but soon surpassed his master. Colbert appointed him battle-painter to Louis XIV. He painted the principal battles and sieges in Flanders for the Chateau of Marly. In 1673 he was made a member of the Academy. Many of his pictures are at the Louvre and Versailles.

Meum, a genus of unibelliferous ants. M. athamanticum is the plants. Splignel, Meu, or Baldmoney of Scot-land. The leaves are bipinnate, with crowded, bristle-like segments, and the umbels of flowers are yellow.

Meung, Jean de (Jean Clopinel) (c.1250-1305), a French satirist, lived in Paris. He wrote over 20,000 lines in continuation of Guillaume de Lorris's Roman de la rose, the style, logical exposition, and virility of which entitle him to be called the first of French mediæval poets. his contempt, moreover, for romance, superstition, feudalism, monasticism, the papacy, and royalty, he was the Voltaire of his age.

Meunier, Constantin (1831-1905), a Belgian sculptor and painter, born near Brussels. Among his best known pictures are: 'The Salle St. Roch,' 1857; 'A Trappist Funeral,' 1860; and the notable series depicting the miners and factory hands in Lemonminer's and necory hands in pennon-nier's Le Tour du monde. But it is primarily as a sculptor he will live. His best statues are: 'Miner.' Pud-dler,' 1885, and 'Mower,' 1892, and a series of bas-reliefs which he called a Monument to Labour.

Meurice, François Paul (1818-1905), a French literary man, studied law and literature; was made ehlef editor of Victor Hugo's Evenement, and imprisoned as such for six months. Metz, Conrad Martin (1755-1827), a of Victor Hugo's Excellent, Metz, Conrad Martin (1755-1827), a imprisoned as such for six months. German engraver, born at Bonu. He imprisoned as such for six months. In 1878 he dramatised Les Mischis original plays wero Benvenuto Nieuwe-Maas, Cellini (1852) and Struensec (1893), which, after en whilst for Falstaff (1842) and Hamlet

(1843) he had collaborators.

Meursius, Johannes (properly Jan de Meurs) (1579-1639), a Dutch classical scholar, hecame professor of history and afterwards of Greek at Leydon University (1610 and 1611), and in 1625 accepted the chair of history at Sorö in Denmark, as the execution of Barneveldt, whose children he taught, had exposed him to ceaseless persecutions. Among many other works he wrote: Res Belgicæ (1612), a Glossarium Græco-Barbarum (1614), and Historia Danica (1630). See also Gronovlus, Thesaurus.

Meurthe et Moselle, a dopt. in the N.E. of France, being formed. after the treaty with Germany in 1871, out of the remnants of the old departments of Mourthe and Moselle. prov. is drained by the Moselle, affluent of the Rhine, and its tribs., and by the Chiors. a trib. of the Meuse. Grand Rougimont (2041 ft.) in the Vosges is the highest peak. The Paris-Strasshurg main line passes through Naney, the cap. The manufs. of cast and sheet Iron, of Iron and steel goods, and of earthenware and glass are very considerable. Rock-Vitleulsalt is found in abundance. ture flourishes, and eereals, potatoes,

ture nourishes, and eere als, potatoes, and hops are widely grown. Area 2020 sq. m. Pop. 564,730.

Meuse: 1. A dept. of N.E. France, composed of portions of Lorraine and Champagne. The basin of the Meuse, which flowing N. from E. to W., occupies one-half of the dept., the rest heing drained in the N.E. by the Orne and Chiers and other streams. The main ridge of high-Orne and Chiers and other ms. The main ridge of highstreams. lands, which sink from south northwards, forms the watershed between the Seino and Rhine. The hills of the Argonne are clothed with magnificent oak forests. Cereals, potatoes, re the staple

ind the vine is Freestone is the mineral

wealth nor the industries are important. Cap.. Bar-le-Due. Area 2409 sq. m. Pop. 277,955. 2. (or Maas) A river, over 550 m. long, rising in the dept, of Haute Marne, France. Passing Verdun in a northerly direction, it enters Belgium, and after hending eastward beyond Namur, flows northward again past Liège in Belglum and Maestricht in Holland. After a sharp curve westward it enters the Waal, that is the left arm of the Rhino, at It now divides, the Woudrichem. northern branch, called the Merwede,

rables, and afterwards Notre Dame do eventually reaches the sea through Paris and Quatre-vingt-treize. Two of two channels, the Oude and the and the southern. which, after entering the Hollandsche Diep, flows into the sea through the Haringvliet and Krammer. Rotterdam and Dinant are both on its banks.

> Meuselwitz, a manufacturing tn. in the duchy of Saxe-Altenburg, Germany, 8 m. N.W. of Altenburg. Pop.

8869.

Mevagissey, \mathbf{a} pilehard fishing station and health resort, 12 m. E. of Truro, Cornwall, England. (1911) 3467.

Mexborough, a tn. with potteries and iron and glass works, on the Don, 5\fm \text{M. N.E. by N. of Rotherham in the W. Riding of Yorkshire, England. Pop. (1911) 14,398.

Mexia, Pedro (1496-1552), a Spanish historian, was appointed historlographer to the Emperor Charles V. in 1548. In his *Historia Imperial y Cesarea* (1547) he chronicled the reigns of all the Roman emperors from Julius Cæsar to the Austrian Hls chief work is Silva Maximilian.

de Varia Leccion, 1543.

Mexico, Gulf of, a great Inlet situated between U.S.A. on the N. and Mexico on the W. and S. It has an area of some 800,000 sq. m., and Is entered by the Gulf Stream, which sweeps its shores in a semicirele. is subject to sudden wind-storms.

Mexico, The Republic of, in the N. American sub-continent, consists of a large platean, 767,005 sq. m. In extent, and from 6000 to 8000 ft. above sea-lovel, ineluding in lts gradual elevation from the sea coast all varieties of temperature from tropical heat to a climate similar to that of Northern The elevation upon which it lies is formed by the mountain range of the Sierra Madre, which divide into an eastern and western range, between which lies the plateau of Anahuae, the district of the ancient Mexican civilisation, which is broken np into many deep and warm valleys, and which is surrounded by the peaks of the mountains, the ridges of which This table-land form its surface. gradually expands in hreadth northwards and remains on an average elevation of about 6000 ft. as far as 420 m. from the city of Mexico, after which it gradually declines. The soil is hard and flinty, and resembles that of Spain. In winter the frosts create great fissures in the ground which in summer are filled up by melted snowwater from the mountains, so that a natural system of irrigation is created. The soil is rich in metalliferous deposits, and silver, antimony, and tho rarer building stones abound. A large flourishing mining industry exists, proceeding to Dordrecht, whence It and this, combined with extensive

Indian of mixed descent, but the oxecutive classes are for the most part of pure Castilian blood. The country is divided into twenty-two states, and the principal cities are Mexico (tho Federal capital, pop. 470,000), Oaxaca, Puebla, Durango, The Oaxaca, Puebla, Durango. The rivers are insignificant and useless for navigation. Pop. 15,063,207. Imports (1911) £20,000,000 (approximate); exports £28,000,000. Constitution.—See Constitution.—

Mexico. History.—In the absence of all

definito evidence, and in the face of an unparalleled dearth of contemporary manuscripts, it is impossible to fix, with any degree of certainty, the earlier events in Mexican ahoriginal history. Tradition speaks of an ancient race called the Toltees, who, in the 11th century, founded the city of Tula, and hecame the disseminators of civilisation and art throughout the length and breadth of the land. Although the existence of this people is accepted as a fact by many writers, others frankly regard them as mythical. An intermediate view is that which agrees that the as the Chichimees, who adopted the latter's non-recognition of the Huerta arts and culture of the raco overthrown. The various sions of this family found throughout a tract of territ

throughout a tract of term mensurate with modern M., of these, the Aztecs, or 'Crane-people,' so-called from the fact that sources and Development of the they dwelt in the low marshes of Mexican People, 1893; Lumholz's the lakes of Texeueo, founded the otty of Anahuac, or Mexico, and worth's The Mines of Mexico, 1905; hecame so formidable to their neighbors. Mexico, 1910; which is the sources and Development of the they dwelt in the low marshes of Mexican People, 1893; Lumholz's Unknown Mexico, 1903; Southbors of Mexico, 1905; Martin's Mexico of the 20th Century, which is the sources and Development of the Mexican People, 1888, and Repeated the Mexican People, 1893; Lumholz's Mexico, 1903; Southbors of the Mexican People, 1893; Lumholz's Mexico, 1903; Southbors of Mexico, 1904; Mexico bours that, by the reign of Monte-zuma II., they had attained a suzereignty over all the tribes from the Atlantic to the Pacific. On the coming of the Spaniards under Cortez in 1519, Aztec rule was finally overthrown, ehlefly hy means of the assistance the Spaniards received from those peoples whom the Aztecs

agricultural operations and cattle-period because of the down-trodden raising ranches, keeps the country in condition of the people. In 1821, a condition of much prosperity. The after a prolonged revolutionary cambulk of the population is of aboriginal paign, the independence of M. was recognised, and an emperor, Augustin recognised, and an emperor, Augustin de Iturhide, seated on the throne. He abdicated in 1823, but, attempting to return, was shot in the following year. M. was proclaimed as a republic in 1824, since when its history has heen more or less of a chequered nature. In 1846 a war with the U.S.A. hroke out, which ended rather disastrously for the northern republic which gended. northern republic, which gained the cession of New M. and Upper California at the price of £5,000,000. In 1863, through the intervention of Napoleon III. of France, the unfortunate Maximilian, an Austrian archduke, was created emperor of M. His reign was brief, and despite a vigorous French assistance, he was hurled from the throne and executed. In latter years M. may be said to have been under the dictatorship of the shrewd President Porfirio Diaz, who undoubtedly did more to bring the country into line with other civilised communities than any of his predecessors. By reasou of a widespread revolution which took place in 1911, he was forced to fly to Europe, and his place was taken by President Madero, who viow is that which agrees that the national monuments which exist in was taken by President Madero, who must be referred to some such civilising agency, but which cannot pasent to any exact identification of that race. This archale civilisation to towards the end of the summer of soon fell hefore the assaults of a 1913 strained relations arose between harbarous folk of Nahua race, known M. and the U.S.A., owing to the harbarous folk of Nahua race, known latter's non-recognition of the Huerta

1907; Enoch's Mexico, 1910; Henry Baerlein's Mexico, the Land

of Unrest, 1913.
Ancient civilisation.—The ancient monuments and other traces of their art and life executed by the pre-Columbian aborigines of M. tend to give us a high opinion of the degree of civilisation to which they had lroin thoso peoples within the Aztees had held in cruel hondage. After the disgrace of Cortez, M. was governed by a viceroy and council, and was regarded as an appanage of the Spanish crown, which condition of affairs lasted for nearly three hundred years, hut not without disturbance, many revolutions, riots, tances disborately carved. On and famines occurring during that wind), Huitzilopochtli (the war god), Tialoc (the rain god), and other deilies. An older deity, Quelzeoatl, also a god of the sky, and son of the sun, was further worshipped, and a host of minor gods were likewise revered. Few traces of domestic The governarchitecture remain. ment was an elective monarchy but the priesthood had great control over the people. However, a well-defined code of laws was observed, and a high standard of morals was in vogue. War usually consisted in the capture rather than the slaughter of enemies, who were reserved for sacrifice, and usually devoured. but this cannibalism consisted more in a desire to realise communion with the deities such captures symbolised rather The Az

besides system of picture-writing they were extraordinarily gifted in the pictile and minor graphic arts, in jewellery, and especially in feather work, of which the garments of the upper

classes principally consisted. Their weapons were by no means suited to a campaign against the steel-clad Spaniards, being for the most part confined to a flint-edged maquahuitl or wooden sword, darts, and

spears.

Mexico City, the cap of the republic of Mexico, is situated in a valley near the former Lake of Texcuco (drained 1900). It is 16 m. in eircumference, and in architectural and other respects compares favourably with the average European city of similar size. One of the principal sights of the city is its splendid national museum, filled with treasure The great of Aztee civilisation. Government Palace and the Academy of San Carlos are also worthy of men-The industries are somewhat limited, and comprise for the most part the manufacture of tobacco and saddlery. But the city is to some

on the site of the temple of a deity, cost \$2,500,000, and is the handsomest ecclesiastica . ing on the American continc: city is well supplied with w

means of two aqueducts.

Mexico the snow-covered peaks of the volcanoes, Popocatepetl and Iztacelihuath, can be clearly distinguished, and the climate is never unduly torrid, even in the height of summer. Many of the relies of the Aztec dominion are still unearthed in began to lecture on physics and

other sacrifices were made to the Mexico, and a school of archaelogy gods Tescatlipoca (the god of the has recently been founded in the city under the direction of Professor Maudslay, an English resident. Pop. 470,659, the majority of whom are native Mexicans, with a very considerable admixture of Americans and Germans.

Meyer, Felix (1653-1713), a Swiss painter, became famous by executing a scries of frescoes for the abbey of St. Florian (Upper Austria). Deficient in the art of figure drawing, he ex-celled in portraying the beauties of his native landscape.

Meyer, Hans (b. 1858), a German traveller, was born at Hildburghausen. After exploring German E. hausen. Africa he ascended Kilimanjaro, the

highest peak of in 1886. In 1 Andes of Ecuac are recorded in Zum Schneedon 1888. scherfahrten, 1890

Meyer, Heinrich (1759-1832), a German painter and art critic, made the acquaintance of Goethe in Rome (1786), and in 1797 settled down in Meyer, Heinrich Weimar, where he enjoyed the great poct's friendship, and inspired him, it seems, with many of those opinionon art and restheties which appeared in Kunst und Alterhum, Winckelmann und sein Jahrhundert, otc. Besides editing Winckelmann's Besides editing Winckelmann's Works (1808-1820), M. himself composed a badly-arranged history of Greek art (1824).

Meyer, Heinrich August Wilhelm (1800-1873), a Gorman Protestant divine and excepte, born at Gotha, and studied theology at Jena. He became pastor in 1841, but gave up the active ministry in 1848 and settled in Hanover. His great work was his N.T. commentaries, which appeared in the monumental Kritischer Kommenter um Neuer exegetischer Kommentar eum Neuen Testament (16 vols., 1832-1859), of which he was chief author.

Meyer, Joseph (1796-1856), a German publisher, was born at Gotha. In 1828 he opened Das Biblioountry. The graphische Institut, a publishing ndation-stone house, at Gotha, and issued German 193, was built classics in serial form and by sub-

'owest possible prices. ought out a People's iral Philosophy, an y, etc. Another of is the admirable

chemistry at Breslau. During the an English poet and essayist, the Franco-Prussian War he tended the daughter of T. J. Thompson. She sick and wounded at Carlsruhe Poly-spent most of her young days in technic. From 1876 onward he held Italy. Her first volume of verse, the chair of chemistry at Tübingen.
In his Die modernen Theorien der Chemic (1864) he helped to develop the startling theory of the periodic classification of elements, and re-calculated the atomic weights. Meyer, Konrad Ferdinand (1825-98),

a Swiss novellst and poet, born at Zürich. Hls Gedichte (1882, 20th ed. 1901) and his charming and idyllic epic, Huttens letzte Tage (1871), more for the modern poetry of Gottfried Keller. And yet he was probably more novelist than poet. His Jörg Jenatsch (1876), Der Heilige (1880), and Die Hochzeit des Mönchs

Meyerbeer, Giacomo, really Meyer-Beer (1791-1864), a musical composer of Jewish extraotion, born in Berlin. He appeared as prodigy planist at the ago of six, and studied under Clementi, Zelter, and Vogler. Aban-doning his early intention of being a pianist, he went to Venice to study composition (1815), where he com-posed several operas, none of them of any importance except the last, Il Crociato in Egitto (1824). In 1826 M. took up his abode in Paris, where his took up his abode in Paris, where his chief operas were produced: Robert le Diable, 1831; Les Huguenots, 1836; and Le Prophète, 1843. M. is one of the most important figures in the history of French opera, both grand and comique. His work is remarkable for its brilliant effects and noweful climers rather than for powerful climaxes, rather than for any mastery of form or coherence. He wrote much instrumental and choral music of a less ambitious nature, and about forty songs.

nature, and about forty songs.
Meyer-Lübke, Wilhelm (b. 1861), a
German philologist, born at Dübendorf. He studied at Zurich and
Berlin, and in 1887 was made professor of romance philology at Jena,
holding the same chair at Vienna
University in 1890. He has published: Grammatica linguæ Græcæ vulgaris, by S. Portius, with a grammatical and historical commentary; and Grammatik der romanischen Sprachen,

1890-1900, which is his greatest work. Industries, horse bre Meynell, Alice Christiana (b. 1850), refining. Pop. 7500.

Italy. Her first volume of verse, Preludes (1875), was illustrated by her sister, Lady Butler, the painter of 'Tho Roll Call,' and won warm praise from Ruskin, but It was her Poems, published in 1893, which definitely established her fame, while her Rhythm of Life, published at the same date, placed her in the front rank of living writers in prose. This was followed by: The Colour of Life and other Essays, 1896; The Children, 1896: The Flower of the Mind. 1897. justify the claim that he has done 1896; The Flower of the Mind, 1897, an anthology of Euglish verse; and The Spirit of Place, 1898. She has also edited the Selected Poems of Hake and the Poetry of Pathos and Delight of Patmore, and contributed to the National Observer, the Pall Mall (1880), and Die Hochzeit des Mönchs National Observer, the Pall Mall enjoyed an enormous popularity.

Meyer, Victor (1848-97), a German chemist, born at Berlin. He became professor of chemistry at Zürich in 1900; Later Poems, 1901; Children 1872, at Göttingen in 1885, and four years later succeeded Bunsen, his old master, at his own university of Heidelberg. Besides important work in organic chemistry, he discovered thiophen and a convenient method of ascertaining the density of vapours.

Meyerbeer, Giacomo, really MeyerMeyerbeer, Giacomo, really Meyer-

Mezen: 1. A tn. and seaport of N. Russia in the gov. of Archangelsk, 15 m. from the mouth of Mezen R. Pop. 1800. 2. A riv. of N. Russia, with a length of 545 m., which flow into the White Sea through Mezen

Bay. Mezerai, François Eudes de (1610-83), a French historian, born at Rye, near Argentan. He was educated at Gaen University and in Paris, and having served in two or three campaigns in Flanders, published his History of France, on the completion of which, in 1651, he became history that the first serious and the serious toriographer of France, and a member of the French Academy. He also wrote a History of the Turks from 1612-49, and an abridgment of his history.

Mezereon, or Daphne mezereum, a small fragrant shrub (order Thymeleacere), indigenous to Britain, with fragrant red or white flowers borne in February and followed by red berries. It is poisonous, but has medicinal uses.

Mézières, a fort. tn. in tho dept. of Ardennes, Francc. It has ammunition factories and copper foundries. Pop. 9500.

Mezö-Bereny, a manufacturing tn., 6 m. N.W. of Bekes, Hungary. Pop.

13,000.
Mezöhegyes, a market tn. of Csanad co., Hungary, 30 m. N.E. of Szegedin. Industries, horse breeding and sugar

Hungary, 50 m. W.N.W. of Debreczin. Pop. 16,000. Mezötur, a tn. of Hungary, near Debreczin, with manufs. of pottery.

Pop. 26,000. Mezozoth, or Mezurzah, a narrow hollow strip of wood or other substanco, with a piece cut out near the top and containing a scroll of parchment on which are written or printed selections from the chapters of the Sherrai (Deut. vi. 4, 9, and xi. 13, 20). On the back of the scroll is written the Hebrew word 'Almighty,' and this is left exposed when the scroll is fixed in the case. The M. is hung up outside or inside Jewish houses. All Jows, when either going in or coming out of a dwelling, touch the word with their right hand, and repeat the eighth verse of Psalm exxi.: 'The Lord shall preserve thy going out and thy coming in from this time forth and even for ever more.' See Friedlander's Text Book of Jewish Religion.

Mezquite, a Moxican name for two members of the genus Prosopis (q.v.).

Mezurzah, see Mezozoth.

Mezzanine, see Entresol. Mezzofanti, Giuseppe (1774-1849), an Italian linguist, born at Bologna. He was educated in his nativo city, and in 1797 became professor of Arabic in the university there, and later assistant librarian of the institute and professor of Greek. In 1831 he went to Rome, and having attracted the attention of Pope Gregory XVI., was made a cardinal in 1838. He acquired a considerable reputation as a linguist, and spoke in all some fifty-eight languages.

Mezzo-soprano, a species of voice which has a somewhat lower range than a soprano, but is higher than a contralto. It is the voice more usually found in women, and has a varying compass generally from A beneath the treble stave to F on the

Mezzotint, a method of engraving invented about the middle of the 17th century, but now so exclusively English as to be termed on the Continent lish as to be termed on the Continent, 'la manière anglaise.' Ms, were formerly engraved on copper, but in the early part of the 19th century steel plates were introduced. The method of M. engraving is as follows: The surface of the plate is scraped in every part with a 'rocking tool,' an instrument resembling a carpenter's chisel, but with a number of tiny teeth. A number of infinitesimally small points number of infinitesimally small points are thus raised on the ground, and for the production of grape fruit, pine are known as the 'burr.' If a print apples, and winter vegetables, and were now made from this plate, it there is a considerable amount of would be uniformly dark. Portions fishing. There are sponge fisheries in ef the 'burr' are now removed with Biscayne Bay. Pop. (1910) 5471.

Mezökovezsd, a tn. in Borsod ce., a 'scraper,' according as lightness of ungary, 50 m. W.N.W. of De-tone is required. For the very light tone is required. For the very light tones, not only the 'burr,' but also part of the ground is removed, since much ink is held in the grooves left by the raising of tho burr.' The method of M. engraving was introduced in the reign of Charles I. by Prince Rupert, and its later history is associated with the names of M'Ardell, J. Raphael Smith, Fisher, Dixon, etc. See A. Whitman's Masters of Mezzotint, 1898; C. Davenport's Mezzotints, 1903.

Mfumbiro, a chain of volcanic mountains near the S.W. boundary of British E. Africa. It consists of two groups—the western which lies directly N. of Lake Kivu, and contains the active volcances Kirunga-cha-gongo and Kirunga-namlagira, and the eastern where the loftiest reals in Vertegierib (1462) ft.) peak is Karissimbi (14,683 ft.).

Mglin, a tn. of Russia, about 125 m.

N.E. of Chernigov. Pop. 8000.

Mho (the reciprocal of the ohm), the practical unit of electric conductivity. Thus if a wire has a resistance of 10 ohms its conductivity is to or 1 mho.

Mhow, a tn. in the native state of Indore, Central India, with a British military cantonment. Pop. (including

garrison) 36,500.

Miagao, a trading and manufactur-ing tn. on the S. coast of Panay Is. in

ing m. on the S. coast of Panay is, in the Philippines. Pop. 22,850.

Miage, a glacier on the S. slope of Mont Bianc. Alt. 12,000 ft.

Miajadas, a tn. of Spain, in the prov. of Estremadura, 32 m. S.E. of Caceres. Pop. 5000.

Miako, see Kyoto.

Miall, Edward (1809-81), an English Nonconformist writer, born at

lish Nonconformist writer, born at Portsmouth. He was minister at Ware in 1831, and at Leicester in 1834, but resigned in 1841 to found the Nonconformist, a newspaper in which he advocated the cause of Disestablishment. He was M.P. for Rochdale (1852-57) and Bradford (1869-74). He published among other works Title. deeds of the Church of England to her Parochial Endowments.

American Miami, a tribe of N. American Indians, belonging to the Algonquian family which originally inhabited

Iamily which originally inhabited Wisconsin. The survivors live on a reservation in Wabach co., Indiana. They took the side of the English in the American War.

Miami, a city and co. seat of Dade co., Florida, U.S.A., ou Miami R. (a trib. of the Ohio) and Biscayne Bay. It is the centre of a country famous

Miani, or Meeanee, a vil. in Sind, grained foliated rock, composed of India, on the Indus, 5 m. N. of Hy-laternating thin ignicular sheets of derabad. A hattle was fought here in

1843

Miaotse, ahorlginal tribes inhabiting the mountain districts of S.W. China. They originally occupied the central province of the empire, hut were driven S.W. to their present abode hy the Chinese,

Miasma (Gk. μίασμα, corruption or pollution), see MALARIA.

Miava, an industrial tn. 46 m.

Miava, an industrial tn. 46 m. N.N.E. of Preshurg, Hungary, on the R. Miava. Pop. 11,750.

Miazzi, Giovanni (1699-c.1780), an

architect, was a native of Bergamo. Among his hest known works are the church of S. Giamhattista at Bassano

and the theatre at Treviso.

Mica, a group of minerals which are distinguished by their very perfect basal cleavage, causing them to split readily into thin flakes, and by their vitreous, pearly lustre. The Ms. are alumino-alkaline complex silicates with iron and magnesia, having an average hardness of 2.5 and sp. gr. of about 3. Muscovite or white potash M. is clear and colourless, and may he obtained in large flexible and elastic plates. It was formerly used for glaz-ing windows under the name of Mus-covy glass, and is still in use for lamp chimneys. Lepidolite, or lithia M., is generally rose-red or violet in colour, while hiotite, magnesia M., is black or Other types of M. are dark hrown. phlogopite, lepidomciane, annite, astrophyllite, aud cryophyllite. The minerals of the M. group are allke in havin fect b

of Moresheth, a village near Gath, on the confines of Judah), one of the twelve minor Hehrew prephets. was the younger contemporary of Isaiah, and is referred to in Jer. xxvi. 18, as having prophesied in the days of Hezekiah and Ahaz, kings of Judah. Almest all critics are agreed that only a part of the book that bears his name can be attributed to the prophet M. himself. Interpolations, generally post-exilic, are frequent, and continually break the city, and lectured there for some time. chain of thought. Thus the first three He visited England in 1741-42, and chapters deal with the destruction of Samaria,

sinfulness of Judah, but

people, and plainly presuppose the exile. Chapters iv. and v. are Messianic, dealing with the future glory of Zion and the world-wide rule of Messiah.

(Camb.

gonal

Mic

G. A. Smilli (1000).

alternating thin lenticular sheets of mica and quartz. It is a typical metamorpbic rock, and occurs very largely in the Highlands, where the older strata outcrop (q.v.). The contained mica is generally muscovite; and garnet, kyanite, schorl, felspar, chlorite, etc., arc accessory minerals.

Michael, spoken of in Dan. x. 13, 21; xii. 1, as one of the chief of the heavenly host and as the guardian of Israel. It is also as the guardian of the church that be appears in Jude 9, and Rev. xii. 7.

Order of, hich was ar. or 3 Ionian Isles and Malta in 1818. It was re-

organised in 1869, so as to admit Crown servants connected with the colonies. It now consists of not more than 100 Knights Grand Cross, 300 Knights Commanders, and 600 Con-

panions.

Michael, 'the Brave' (1558-1601). voivode of Walachia, succeeded to the throne in 1593, and during his relgn secured Wallachia for a time a place in universal history. He invaded Turkish territory, aided by Sigismund Báthory, and took by storm Rustchuk, Silistria, and other places on the Danube, and also defeated a large Turkish and Tartar army which invaded Wallachia. In 1595 he gained a further victory at Mantin, and subsequently defeated Sinan Pasha, who invaded Wallachia with 100,000 men, and stormed Bucharest. His independence was acknowledged by the sultan in 1597. In 1599 he invaded Transylvania, defcated Andreas Bathory (Sigis-

oclaimed the voiınder his He was.

however, driven out of Transylvania by a revolt, but returned, and with the imperial General Basta defeated the Transylvanian forces at Geroslo, expelling Sigismund Bathory. murdered in 1601 hy Basta's orders.

Michaelis, Johann David (1717-91), a German Biblical scholar, born at Halle. He was educated in his native

as appointed professor of Gottingen,

ch. ii. deal with the restoration of the addition professor of Oriental languages in 1750. Ameng his works are: Supplementa ad Lexica Hebr., 1784-92; Introduction to the New Testament (4th ed.), 1823; Oriental-ische und exegetische Bibliothek, 1775-Camb. 85; Neue O. und E. Bib, 1786-91;
A. Small (1994). Mosaisches Recht, 1770-71; LitteraMica Schist, a schistose or fine- rischer Briefwechsel, 1794-96. He also

bο at Leipzig, hut being attracted by poctry published, with Gellert and Weisse, a collection of fables, and soon after gave up his profession of a doctor. His works, which consist of odes, satires, lyrics, comic operas, etc., were published at Vienna in 1791.

Michaelmas Daisy, a name given by gardeners to Aster tradescantea. Known also by this name is the sea aster or starwort (Aster trifolium).

Michaelmas Day, the festival of St. Michael and All Angels, celebrated in the Western Church on Sept. Michaelmas is frequently used for

dating terms, etc.
Michaud, Joseph Francois (1767-1839), a French historian and publicist, born at Albens, Savoy. He was cducated at Bourg-on-Bresse, and went to Paris in 1791 where he became the editor of La Quotidienne, in which he espoused the royalist cause. He narrowly escaped death during the Roign of Terror, and after 1800 abandoned journalism and began to write books. He published Historie des croisades, his chef-d'œuvre; Correspondance d'orient, as a result of his visit to Syria and Egypt for the purpose of collecting material for his masterpiece; and other works.

Michaux, André (1746 - 1802), French botanist and traveller, born in Sartory. He made journeys to several parts of the world, first to England (1779), from which country he introduced into France several new varieties of trees and shrubs: recond, to the Auvergne and the Pyrenees (1780), bringing back several sorts of grain; third, to Persia (1782), whence he brought back a fine herbarium and valuable seeds; fourth, to N. America (1785), travelling from Hudson Bay to Florida and the Mississippi. Unfortunately nearly all his collection was lost.

Michaux, François André (1770-1855), son of the above, accompanied his father on his N. American tour, and also made another journey to that continent in 1802. He published Histoire des arbres forestiers de l'Amérique septentrionale (3 vols.), 1810-13, which has been translated into English under the title, North American Sylva.

Michel, Francisque (1809-87). French antiquary, born at Lyons, and became professor of literature at Bordeaux. He visited England and Scotland to carry out his archeological researches. He edited old French works, such as La Chanson de Roland,

published a reprint of Lowth's Chansons de Coucy, translated Eng-Praelectiones, with important addi-lish works into French, and published tions, 1758-62, and a German trans- original works, the chief of which are: lat ; et de l'Espagne; Le Pays

and Les Ecossais en France

et les Français en Ecosse.

Michel, Louise (1830-1905), a French anarchist, born at Vroncourt in Haute-Saône. She became a teacher in Paris, but soon gave it up for social and political work. joined the Communists at the outbreak of their rising of 1871; was captured and transported to New Caledonia. On her release she re-turned to Paris and joined another anarchist rising, for which she was sentenced to six years' imprisonment. She was, however, released after three years in 1886 and soon after-wards went to London. She returned to Paris in 1895, where she died. Her works include: La Misère; Mémoires; Les Crimes de l'époque; and La

Commune.
Michel, Nicolaievitch (1832-1909). a Russian prince, was brother to Tsar Alexander II. He was governor-general of the Caucasus in 1863, field marshal, and later director-general of artillery, and president of the council of the empire. During the war with Turkey in 1877 he captured Ardahan

and Kars. Michelangelo, or Michael Angelo, Buonarroti (1475-1564), an Italian sculptor, architect, painter, and poet, born at Caprese, of an honourable and ancient, though poor, family. After being at school with Maestro Francesco da Urbino, ho made friends with Francesco Granacci a pupil of Domenico del Grillandaio, with whom M.'s father, although holding art in contempt, at length allowed him to study. His talent even at this early ago was very marked, so that he was chosen by Ghirlandalo as one of the youths whom Lorenzo de Medici, the Magnificent, allowed to work in his garden under Bertoldo. Here he executed the 'Faun's Head,' which so delighted Lorenzo that he took him into his establishment and treated him as his son. M. was between fifteen and sixteen years of age when he entered Lorenzo's house, and he stayed with him until his death in April 1492; whilst there he executed the bas-relief called 'The Rape of Deianira, or 'The Battle of the Centaurs, now in the Casa Buonarrott, Florence. On the death of Loronzo, M. returned to his father's house for a short time, until Pier de Medici, Lorenzo's heir, requested his presence. He left Florence on account, it is said, of a visionary promonition which one Cardiore had of the fall of the Medici, and went to Bologna, where Messer

Gian Francesco Aldovrandi befriended | turned to Florence, where he stayed him. Returning to Florence when until the Pope had sent three briefs Gian Francesco Aldovrandi befriended him. Returning to Florence when matters were settled, in 1496 be went to Rome to the Cardinal di San Giorgio, who had bought a Cupid of M.'s under the impression that it was a real antique. During his stay in Rome, M. executed a Cupid (now at S. Kensington), and a Bacchus (now in the National Museum, Florence), for Messer Jacopo Galli, and the Madonna della Pieta (now in St. Madonna della Pieta (now in St. Pctcr's, Rome), at the request of Cardinal Royano. In 1501 he returned to Florenco on family affairs, and in 1504 carved the colossal statue of David, nine braceia high, out of a blook of marble, spoilt in the roughing out,



MICHELANGELO

""bably by o. This is lelle Arti,

Florence. In the same year he commenced the cartoon for the decoration of the council hall at Florenco, a tion of the council hall at Florenco, a work on which Leonardo da Vinci was also engaged. The paintings of both have been lost. After the death of Pope Alexander VI., Julius II. called M. to Rome, and commissioned him to make his monument. The design for this work was very highly approved by the Pope, and in April 1505 M. went to Carrara to superintend the supervision of the necessary markle.

demanding his return; at length be went to see the Pope at Bologna, and received his pardon. Whilst at Bologna, be executed a portrait statue of Julius In bronze, three times life-size, which was placed on the front of the Church of San Petronio, but destroyed on the return of the Bentivogli. When M. returned to Rome, Bramante persuaded the Pope that it would he a bad omen for his tomb to be built before bis death, and induced him to ask M. to paint the vaulting of the Sistine Chapel, thinking that such a work would show his genius in a less favourable light. genius in a less favourable light. Although unwilling, M. yielded to the importunity of the Pope, and finished the work, unaided, savo for workmen and writers for the lettering, in twenty months. This, his greatest work in painting, represents the creation of the world, and of man, the flood, and various biblical stories. When the Sistine Chapel was completed M. grain heaven involved in pleted, M. again became involved in The Tragedy of the Tomb.' On his return from Florence, whither he had gone after the completion of the gone after the completion of the chapel, he again started work on his designs for the tomb of Julius, but the death of the latter interrupted the work. Leo X., Julius's successor, ordered him to undertake the ornamentation of the façade, of San Lorenzo at Florence. This was a great disappointment to M., but his protests were unavailing, and he was also obliged to spend six vers in proalso obliged to spend six years in pro-curing marble from the quarries of Pictrasanta. In 1521 M. executed the 'Risen Christ,' now in the Santa Maria Sopra Minerva, Rome, a work which was finished and therefore marred, in details, by other lands. When Clement VII. became Pope he lost no time in setting M. to work, and by 1524 the tombs of Lorenzo de' Medicl were fairly under way. These were not destined to be finished, and it was not until 1535 that M. finished It was not until 1535 that M. hished what work there is of his in the building, including the grand figures of Day and Night, Morning and Evening. In 1529 be had been appointed general over the construction of the walls and defences of the city of Florence, which fell in the following year. After this 'The Tragedy of the Tomb' at length came to a close; the finished work contained only the Tomo at length came to a close; the inished work contained only the 'Moses,' by M. himself. In 1534 be was commissioned by Pope Paul to do the 'Last Judgment' in the Sistine Chapel, a great work which occupied the state of the country of the coun Al. went to carrara to superintend the imissical work contained only the quarrying of the necessary marble, 'Moses,' by M. himself. In 1534 be an operation which occupied over eight months. The architeot, Bradantender, who was icalous of M., in Chapel, a great work which occupied fluenced the Pope against him, and shortly after his return from Carrara ho was refused admittauce to the Papal antechamber. In anger, he re-the two frescoes for the walls of the

Capella Paolina, Rome, was comton the power they supply rather than pleted, representing the Martyrdom for their navigation. The state is pleted, representing the Martyrdom of St. Peter and the Conversion of St. Paul. All through his life he composed majec (in 1912, 55,250,000 bushels), sonnets when his sculpture was not going well, and he was disturbed; the best are addressed to Vittoria Colonna, tho widow of the Marquis of Peseara. During the winter of 1563-64 M.'s friends suffered great for ownerly on his behalf, which was only too well founded, as he died on F 18, 1564. See Giorgio Vasari, Le was exceeded by min Condin. and silver mines are also worked, and

Scritta da A. C. suo disception 1553, (1st ed., Loma); J. A. Symonds, The Life of Michelangelo Buonarroti, 1893, and The Sonnels of Michael Angelo Buonarroti and Tomaso Campanella, 1878; C. Holroyd, Michael Angelo Buonarroti, 1903, etc.

Michelet Jules (1798-1874)

(1798 - 1874), a born at Paris, Michelet, Jules French historian, French Distorian, Dorn at Falls, was the son of a printer. He was educated at the Lyeée Charlemagne, and in 1823 was appointed professor of history in the Collège Rollin. His first works appeared in 1825-27, and were concerned with modern history, and in 1827 he was appointed mattre de conférences at the Ecole Normale, becoming assistant to Guizot at the Sorbonne in 1830. In 1831 he published the Introduction a l'Histoire E.S.E. of Chicago, on Lake Michigan, universelle, and soon entered upon his chief

Histoire de France (from ϵ to the outbreak of the Revolution), publishing about the same time, Œuvres choisies de Vico, the Mémoires de Luther, and the Origines du Droit Français. In 1838 he was appointed to the chair of history at the Collège de France, and published his lectures in Le Prétre, la Femme, et la Famille, and Le Peuple. In 1839 vic Bistoire

romaine appeared, and great history he wrote, Révolution française. books on natural histo:

books on natural histo:
L'Insecte, La Mer, and La Montagne,
as well as Les Femmes de la Révolu-L'Amour, one of his most popular books, La Femme, La Sorcière, La Bible de l'Humanité, an historicai sketch of religion, and Nos Fils, a treatise on education.

Michigan, a north-central state of the U.S.A., having an area of 58,915 sq. m. It is known as the Peninsula sq. m. It is known as the Pennshia and Rephew, he despatched that a state because of its natural division 134 R.c. to Spain, to serve under into two parts, separated by the Scipio. At the latter's recommendation, however, ho made Jugurtha Lakes Huron and Michigan. The joint heir with Adherbal and Hieupehief highlands are the Porcupinc Mts. (1830 ft. above sea-level) in the N.W., and the chief rivors are the Muskegon, Grand, St. Joseph and Kalamazoo, which are important for Zaosic, near Novogrodek in Lithuania.

nio Condin, and silver mines are also worked, and Buonarroti Portland cement is another valuable product. The most profitable industries are the manufacture of automobiles, furniture, and machinery, and. pre-eminently lumbering. Michigan University was founded in 1837 by Ann Arbor, and in 1911 had over 5000 students. There is a Senate of 32, and a House of Representatives of 100 members, and in the national assemblies M. is represented by 2 senators and 13 representatives. senators and 13 representatives.
Detroit is the chief town; pop. (1910)
465,766. Father Marquette, a Jesuit missionary, founded a settlement here in 1668. Tho state was ceded by the French to the English in 1760 and passed to America in 1796. (1910) 2,810,173.

Michigan City, a lake port, 37 m.

Lake, a great lake of N. America, bounded on the N.W. and E. by Michigan, on the S. by Indiana, and on the W. by Wisconsin and Illinois. The Strait of Mackinac connects it with Lake Huron. 22,400 sq. m. Length 325 m; mean breadth 75 m; mean depth, 870 ft.

Michoacan, a state of Mexico, having an area of 22.874 sq. m., and eithe for 101 m.

ancitaro (12,660 peak. Tho chief

rivers are the Lerma and the Balsas. The staple products are minerals (gold, silver, lead, copper, petroleum, etc.), cereals, fruit, coffee, and sugar cane. Morelia (39,116 inhabitants) is the cap. Pop. 991,649.

Micipsa, King of Numidia, was the son of Massinissa, and reigned from 148 to 118 B.C. Afraid of Jugurtha, his nephew, he despatched him in 134 B.C. to Spain, to serve under Sciplo. At the latter's recommendation

He was educated at Novogrodek until , 1814, when he entered the university of Wilms. After passing his examinations with honours, he obtained the tions with notions, he obtained the post of a schoolmaster at Kowno. In 1824 Novosiltzov, the cruel and intelerant governor of Lithuania, condemned the members of the Philomathan and Philoretian societies on the most insufficient evidence, and M. was, after imprisonment, banished to Russia. He had already published two volumes of miscellaneous verse, and on his arrival at St. Petershurg, was at once received in literary circles with open arms. In 1829 he went to Germany, Switzerland, and Italy, finally taking up his residence at Paris in 1832. In 1840 he was appointed to a newly-founded professorship of Slavonic literature in the Collège de France, hut he was expelled from his chair hy the French government in 1844, and was without employment until 1852, when the post of librarian at the Arsenal was ob-tained for him by Prince Napoleon. He died of cholera at Constantinople whilst engaged in forming a Polish legion against Russia. His remains were, in 1890, removed to the Cathedral at Cracow. M. Is the most in-spired poot of Poland, and the flaming ardour, the passionate sincerity, and the exquisito language of his poems, allied with their national melaneholy, eause him to he hy far the most popular in his own country, although, unfortunately, hut little known in England. His chief works are: Konrad England. His cities was as a superior water of the light
Bardner,

sa Vie

Adam Mickiewicz, 1911, etc. Mickle, William Julius (1734-88), a Scottish poet, was the son of a Presbyterian minister of Langholm, Dumfriesshire. After failing in business, he became corrector to the Clarendon Press, published a Spenserian poem called the Concubine (1767, revised as Sur Martyn), and printed a very diffuse and rather poor translation of Camoens's Lusiad (1775). Scott's Kenilworth is based on M.'s ballad, entitled Cumnor Hall.

Micmaes, a trihe of N. American Indians, of Algonquin stock, who formerly roamed Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland. During the colonial wars they were allies of the French. They nownumber about 4000, havebecome civilised, but are scattered about their former territories.

Micon (fl. 5th century B.C.), Greek painter, was the contemporary

skill in drawing horses. His battles hetween the Amazons and Athenians decorated the walls of the Cerameieus and the temple of Theseus in Athens. He was also a sculptor.

Miconia, a genns of trees and shrubs of tropical America (order Melastomacere) with ornamental foliage and panicles of white or red flowers.

Microbe, see BACTERIA.

Microcachrys (Tetragona), strawherry-fruited cypress, a prostrate, evergreen shruh bearing small, bright red cones (order Coniferæ). It is a native of the Tasmanian mountains.

Microcosmand Macrocosm. Arising from the belief of the ancients that the cosmos had a soul, the idea followed that the vital movements of man, the microcosm or little world, corresponded to those of the universe. the macrocosm or great world. From this astrology followed, or the belief in the idea that the movements of the heavenly hodies affect human lives. Pythagoras, Plato, the Stoics. and Paracelsus, were exponents of the doctrine. See ASTROLOGY.

Microcosmic Salt (NaNH4HPO4. 4H2O), sodium ammonium phosphate, is so called because it is formed in the evaporation of human urine, and was regarded by the alchemists as an extract of the human microcosm. It is obtained by adding a strong solution of common sodium phosphate to ammonium chloride. The salt is used in hlowpipe experiments since it decomposes on heating to give a glassy bead of sodium metaphosphate

Microlestes, a genus possibly of marsupials of remote antiquity, founded on a few teeth discovered in Somersetshire and Würtemberg. Palæontologists differ as to its true

zoological position, Microliths. Vitr Vitreous rocks are not altogether void of erystalline material. Under the microscope, numerous small crystallites are to be seen which may he drop-like (globulites), rod-shaped (belonites), or like coiled and twisted hairs (trichites). Besides these crystallites, exist needle- and rod-shaped bodies called microliths which are distinguished from the above by the fact that they react on polarised light (a.v.), and can be generally referred to some mineral specles—felspar, augite, hornblende, olivine, etc. Combinations of simple microliths occur presenting a curious forked annearance (skeleton crystals). forked appearance (skeleton crystals), and their linear arrangement indicate the fluxion-structure of the rock

Micrometer, the name given to instruments for measuring accurately very small angles or spaces. There are several types of which the following are the most important: Gasof Pheidias. He was renowned for his coigne invented the first instrument

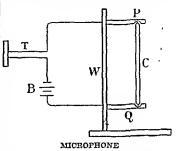
sist generally of two very fine wires, one fixed and the other movable, placed in the focal plane of a tele-The movable wire is fixed on a sliding plate and can be moved parallel to the other by means of a until the object appears between the wires. The movement cau be measured by means of the screw, the pitch of which is known; and the head of the screw is subdivided in order to measure fractions of a revolution. Thus the angular dis-tance which the object subtends can be measured. In the position can be measured. In the position wire M. the two parallel wires are actuated by independent screws. The whole apparatus can be rotated in the plane of the wires, so that they can be placed in any direction, the angle through which it is rotated being measured upon a small circle called the position circle, Another type consists of an object glass divided into two semicircles, which can be separated by sliding, so causing the image formed respectively by each half lens to move. Dollond introduced a convex lens divided similarly to the above into the eye-piece of the telescope. Various other types which depend on the phenomenon of double refraction have been introduced. The circular M., perfected by Fraunhofer, consists of a metal ring set in a perforated glass plate. The ring is placed in the focal plane of the telescope; the time when a star disappears at the outer ring and reappears at the inner ring being observed. This is chiefly used for determining the They are capable positions of stars. of measuring to a hundredth part of a millimetre. See HELIOMETER.

the 17th century.

of a millimetre. See HELIOMETER.
Micronesia (from Greek, small
islands), tho name of that part of
the Pacific Ocean between long. 130°
and 180° E. and lat. between 20° N.
and the equator, which embraces
the Ladrone and Caroline islands,
the Marsball and Gilbert archipelagoes. The groups are described

under their separate titles.

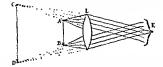
Microphone, The, was invented by Professor Hughes, and is now universally used as the transmitter in telephony. Hughes found that if a telephone receiver were placed in the series with a resistance formed by a bad contact made of three looselybad contact made of three looselybad contact made of the places would produce a sound in the fitting pieces of carbon, then any would produce a sound in the receiver. A simple form of the instrument consists of two pieces of carbon P and Q (see figure) fixed to a vertical piece of wood W, and a carbon rod C in the focal plane of the lens. In the group the consistent than the inches, the typie again becomes confused. If a so-called magnifying glass be interposed between the eye again becomes distinct. Thus the function of the leus or magnifying glass is simply to allow the eye to approach nearer tho object than would otherwise be consistent the fitting received by the first product of the lens may be explained as follows: In the focal plane of the lens. In the eye, and AB the object placed in the focal plane of the lens the rays of light. This is connected to the battery B

Ms. coufine wires,
movable,
for a teleof


This forms the bad contact. The carbon plate is usually protected outside by a piece of wire gauze.

Microscope, an optical instrument which enables the eye to see dis-tinctly magnified images of small objects which would otherwise remain unobserved. The term magnifying needs some explanation in order to show the function of the lenses of a microscope. In cases of this kind, magnification is obtained by allowing the are to entreech by allowing the eye to approach nearer to the object. For example, a bill posted on the other side of the street cannot be seen distinctly enough to be read, but on nearer approach the type becomes more This is a simple and more plain. The eye case of magnification. accommodates itself to the varying distances until a distinct image is There is a formed on the retina. limit to the cye's power of accommodation, as may be observed from the fact that if approach is made to the bill nearer than ten inches, the type again becomes confused. If a soagain becomes confused. called magnifying glass be interposed cancer magnifying gass be interpreted between the eye and the bill, the type again becomes distinct. Thus the function of the leus or magnifying glass is simply to allow the eye to approach nearer the object. than would otherwise be consistent with distinct vision. The action of

too great an angle to be completely differs somewhat from the above. focussed on the retina, and hence the confusion in what is seen. The lens intercepts the rays, and bends them into parallel rays which appear to



come from CD, a position consistent with distinct vision. The rays are now focussed completely on the retina, and distinct vision is obtained. The eye in this ease views the image

CD and not the object AB.

Clearly, from the diagram the lens appears to remove the object away from the eye. This leads to another consideration in the making of a microscope. It is a matter of common experience that the further away an object is, the less brilliant it appears to be, the reason being that the pencil of rays is so large that they do not all enter the eye. the above discussion we have assumed that all the rays through L enter the eye. But it is found that when a large pencil passes through a lens it suffers a good deal of distortion due to the spherical shape of the lens. This distortion is termed spherical aberration. To obviate this a stop is placed behind the lens so as to cut off the extreme rays which suffer the most distortion. There is the above discussion we have assumed another effect due to chromatic aberration, which renders the edges of the image indistinct. This is also obviated by cutting out the extreme rars by means of a stop. The stop obviously reduces the size of the pencil of light entering the eye, and pencil of light entering the thus the maximum quantity of thus the maximum quantity of the things is not attained. The illumination is not attained. The stop was eventually discarded in favour of a system of lenses which are so arranged that the rays are are so arranged that the rays are refracted at smaller angles through each of them, and thus eliminating to a large degree the effects of aberration, whilst allowing the whole pencil of light emitted to be conveyed to the eye with very little loss in intensity. Wollaston's doublet was the first combinations doublet was the first combination of two lenses for this work. It con-

and affords a greater degree of magnification. Its essential features are the objective and the eyo-piece. The objective is the system of lenses near the object, forming a real image of the object This is observed through the eye-pleeo, which forms a virtual magnified image of this real image. The objective eonsists of a system of lenses to minimise spherical and ebromatic effects which in this case would be very large owing to the nearness of the object

to the objective.

Various combinations have been used. The most effective objective is the one invented by Abbe, by means of which almost perfect images were obtained. The object is imwere obtained. The object mersed in oil, into which the plane surface of the lowest lens dips, the refractive index of the oil being the same as that of the lens. There refractive index of the oil being the same as that of the lens. There are two types of eye-piece in general use, viz. Huyghens and Ramsden. The Huyghens eye-piece is the one generally used, but where measurements have to be made which necessitates the introduction of a micro-meter scale into the instrument to meter scale into the instrument the Ramsden's eveniece is used. The Huyghens eye-piece consists of two converging lenses whose focal lengths are in the ratio 3:1, and placed at a distance from each other equal to the difference of their focal lengths.

The Engage The Ramsden eye-piece consists of two lenses of equal focal length sepatwo lenses of equal focal length separated by a distance two-thirds of their focal length. The object is generally illuminated by means of transmitted light. There is no limit to vision. Any particle, however minute, can be observed so long as it can be illuminated. If its length of the particle of the light of the is less than half a wave-length of light, it is illuminated by focussing an intense beam of light upon it, and then viewed through a M., when It appears as a bright spot.

Microscopium (the Microscope), a southern constellation formed in 1752 by Lacaille, situated above Grns and Indus at the junction of Capricornus

and Sagittarius.

Microstylis, a genus of terrestrial orehids with handsome leaves, and small greenish - yellow or purple

flowers.

Microtome, an instrument adapted for cutting fine sections of material of two lenses for this work. It consists of two lenses placed at a definite distance apart. Thus by increasing the number of lenses the aperture is ties, but the escential part of the increased, and thus more light free strument is a device for leading an from aberration effects enters the eye, and a distinct, well-illuminated material to a cutting instrument, or water the resident of the instrument is a device for leading the eye, and a distinct, well-illuminated material to a cutting instrument, or for leading the cutting instrument, or for leading the cutting instrument. image is seen. These are the main for leading the cutting instrument to principles underlying the theory of the block by a sliding arrangement the simple M. The compound M. whose motion is exactly governed by

graduated screws. block is usually composed of paraffin or some similar substance in which the material to be examined can be immovably embedded and protected from air and damp. The height of the block is determined after once cutting it in the M., after which its height can be adjusted by screws, so that a sec-tion with a uniform thickness of as little as '002 mm. can bc cut. Some of the more expensive Ms. are to a high

degree 'automatic. Midas, son of Gordius and king of Phrygia, renowned for his immense riches. In consequence of his kind treatment of Silenus, the companion and teacher of Dionysus, the latter allowed M. to ask a favour of him. M. In his folly desired that all things which he touched should be changed hito gold. The request was granted: but as even the food which he touched became gold, he implored the god to take his favour back. Dionysus accordingly ordered him to bathe in the sources of the Pactoius near Mt. Tmoius. This bath saved M., but the river from that time had an abund-ance of gold in its sand. Once when Pan and Apollo were engaged in a musical contest on the flute and iyre, M. was choson to decido between them. The king decided in favour of Pan, whereupon Apollo changed his cars into those of an ass. M. contrived to conceal them under his Pirygian cap, but the servant who used to cut his hair discovered them. The secret nis hair discovered them. And sector so much harassed the man that, as he could not betray it to a human being, he dug a hole in the earth, and whispered into it, 'King Midas has ass's ears.' He then filled up the hole, 's 'c' he hole in the sector with the hole.'

of Zeeland, Netherlands, on the island of Walcheren, 4 m. N. of Flushing. It has an old abbey dating from the 13th century. It was a Hanse town, and its charter dates from 1225. Pop. 19,564. 2. The cap. of a district of the same name, in the Transvaal, S. Africa, on a trib. of the R. Olifant, 98 m. E. of Pretoria. Pop. (Europeans) 3700. 3. The cap. of a div. of the same name, Cape of Good Hope, S. Africa, 250 m. N. by W. of Port Elizabeth, in a fertile agricultural district. Pop. 4000.

Middle Ages, The, a term generally applied to the period between 500 and 1500 A.D., though frequently it is used to designate the centuries between the year 1000 and the Renaissance. It is better, however, to use the year 1000 as the dividing line between the barian hordes. An attempt to stem the flood of ignorance and barbarism

The embedding was made by Charlemagne, and from the time of his coronation (800 A.D.) dates the mediaval conception of the holy Roman empire, the emperor and the pope sharing between them the sovereignty of the world, the one the sovereignty of the world, the one the temporal, the other the spiritual head. The next 200 years, however, are years that truly deserve the title of Dark Ages, once so indisoriminately applied to the whole of the medieval period. In the 11th contury there was the dawn of a true renaissance, associated usually with the name of Pope Hildebrand. The period of brilliance in literature, art, and economics that in literature, art, and economics that followed this revival is the delight of every sympathetic student of the M. A. The spirit of the M. A. was lost in the Renaissance.

Middleboro, a tn. and summer resort in Piymouth co., Massachusctts, U.S.A., 35 m. S.E. of Beston;

has manufs, of shoes, woollens, iron goods, and tiles. Pop. (1910) 8214. Middle Caraquet, a tn., Gioucester co., New Brunswick, Canada, 12 m. W.N.W. of Shippegan. Its chief industries are flour, lumber, and canneries. Pop. 6100.

Middle Franconia, see FRANCONIA. Middle Latitude, in navigation, the mean of two latitudes. It is the distinctive name of a method called in navigation M. L. sailing, which means that, in estimating the difference of. longitude by means of the differences of latitude and the intermediate departure, this departure is supposed to be an arc of a parallel of longitude at the intermediate or M. L. (see Riddle's Navigation, in which a table may be found corrective of the resuits.

Middle Park Plate, see RACE MEET-

Middlesboro, a city in Bell co., Kontucky, U.S.A., 64 m. N.N.E. of Knoxville, Tennessee; has coal and iron mining, and manufs, of steel, brick, and beer. Pop. (1910) 7305.

Middlesbrough, a thriving and important manufacturing tn., river-port, and municipal, co. and parl. bor. of England, in the N. Riding of Yorkshire, at the mouth of the Tees, 20 m.S.W. of Durham, on the Stockton and Darlington Railway. The town is of recent growth, the first house having been bullt in 1830. It was in-corporated in 1853. It is now chichy known as a rapidly progressing centre for the iron manuf. There are also chemical, brass, engine, and bottle works, potteries, and blast-furnaces; shipbullding is also carried on, and iron-stone is quarried in the vicinity. early and later M. A. The year 500 There are large docks, and among the roughly marks the inrush of the barmanufactures are saileloth, rope, and Pop. (1911) of parl. bor. pottery. 139,321.

Middlesex, the metropolitan eo. of South Kensington Museum. England, has an area of 279 sq. m. The county belongs entirely to the basin of the Thames, which forms its S. boundary. The Lea flows along its E. boundary, and the Coine hounds it on the W. A range of hills extends border, along the Hertfordshire reaching 500 ft. at Stammore and Harrow, but that portion of the county which lies S.W. of a line drawn from Brentford to Uxbridge is an almost unbroken flat, scarcely rising more than from 10 to 20 ft. above the level of the Thames. The county is intersected by the New R. and gardening is the chief industry. The county is divided into sevon parliamentary divisions, each returning content of the distinction of being obtained in the sevon parliamentary divisions, each returning citied to by the Spanish ambassador one member. There is a small-arms factory at Enfield, and government powder mills at Hounslow. Pop. Middleton Thomas Middle

Middle Temple, see INNS OF COURT. Middleton, a municipal bor, of Lan-cashire, England, 5 m. N.N.E. from Manchester. It is an important seat He edited several journals, and pubof the cotton and silk manufs. and chemicals are manufactured

calico printing is earried on. are coal mines and iron works. 1911) 27,983.

York itself. He was a fleree and bitter controversialist, and among his best known pamphlets are: A Letter from Rome, 1729; and An Inquiry into Miracles, 1748. He anticipated the method of historical criticism applied to the O.T. stories. His best work is the interesting and valuable Life of Marcus Tullius Cicero, 1741.

Middleton (or Myddelton), Sir Hugh (c. 1560-1631), an English engineer, born at Denbigh, N. Wales. In 1606 he made an offer to parliament to bring drinking-water, of which there was a great scarcity, to London. In 1609 the first sod upon the works of the New R. was turned, and in 1613 in voite of strenuous opposition from and manufs. cars, stoves, iron tubes, the landowners and financial diffi-furniture, leather, etc. Pop. (1910) culty, t to the

The ori from the Chadwell and Amwell, and Chester. after a course of 38 m. entered a reservoir at Islington

Middleton, John Henry (1846-96),

many valuable contributions to the Ency. Brit., he wrote Ancient Rome, 1885; Remains of Ancient Rome, 1892; Illuminated MSS. of Classical Times,

1892.

Middleton, Thomas (1570-1627), a dramatist, of whose early life little is known. He wrote plays by himself, and also in collaboration with Drayton, Webster, Munday, Dekker, and Rowley, and besides plays, com-posed many pageants and masques. The first play written by himself was The Chester Tragedy (1602). He was at his best when writing comedies of

1822), Bishop of Calcutta, born at Kedleston, Derbyshire. After hold-ing various livings, he was consecrated bishop of Calcutta in 1814.

> 4rticle Illus-808 in the

Eng-

Middleton, or Midelton, a market land, on the R. Tees; has lead mines. tn. of Ireland, in the eo. of and 13 m. E. of Cork; has a whisky distillery and flour-mills. Pop. (1911) 3500.

Middleton, Conyers (1683-1750), an English divino and controversialist, horn at Riehmond in Yorkshire, or at York Itself, Howas a flerce and bitter of a trace.

of cotton machinery

of |

plate, and rubber. Pop. (1910) 20,749. 2. A city in Orange eo., New York, U.S.A., 57 m. N.N.W. of New York City, in a riell agricultural district. Manufs, include straw hats hardware, and eigars. Pop. (1910) 15,313. 3. City in Butler co., Ohio, U.S.A., on the Miami R., 35 m. N. of Cincinnati, with manufs. of tobacco, paper, bicycles, steel and agricultural instruments. Pop. (1910) 13,152. 4. Tn. in Dauphin co., Pennsylvania, U.S.A., on the Susquehama R., 9 m. S.E. of Harrisburg; has flour and planing mills,

" ddlewich, a market town in ire, England, 21 m. E. of ter. There are chemical works and a condensed milk factory.

is produced. Pop. (1911) 4910.
Midges are small dipterous insects (tribe Nemocera). They differ from tho gnats or mosquitoes in the absence m of their long, slender, horny probos-bridge, and in 1892 art director of the cis. Most of them are quite harmless,

species of the genus Ceratorogon have the mouth highly developed, and with pointed lancet-like organs are able to draw blood. A typical M. is Chironomus plumosus, the aquatic larva of which is the blood worm. Many of the gall M. (Cecidomyidro), including the hessian fly and the wheat M., are serious plant

Midhat Pasha (1822-84), a statesman, born in Constantinople. His first important mission was to subdue the brigandage in Rouncila; on returning was promoted to the returning was promoted to the supreme council, and then made governor of Bulgaria. In 1860 he was inade Pasha. He visited several of inade Pasna. He visited several of the capitals of Europe, and then re-turned to frame the laws of the vilayets. In 1864 he was made governor of the vilayet of the Danube, and endeavoured to recon-cile the Bulgarians to the Ottoman He was twice Grand supremacy. vizier, once under Abdul Aziz (1871), and Abdul Hamid II. (1877). Midhurst, a market tn. of Sussex,

England, on the Rother, 11 m. N.N.E. of Chichester. It has a grammar school (1672) and the King VII. sanatorium. Edward

(1911) 1700.

Midi, Canal du, or Canal du Languedoc, a canal of France, connecting the Garonne with the Mediter-

might be described with the healter ranean. Length 150 m.

Midi, Dent du, a mountain of the Alps. S. of Lake Geneva, between the Swiss valleys of Chambéry (N.W.) and Salvan (S.E.). It was first ascended in 1784 by Clement, curé of Chambery.

Midl, Pic du, a bold peak of the Pyrenees, S. France, 6 m. S. of Bagneres-de-Bigorre. Alt. 9465 ft. Midlanites, an Arab race, descended,

according to Gen. xxv. 2, from Midian, the son of Abraham, and his Arab wife, Keturah. They occupied the land to the S. of Moab and Edom. Joseph was sold to Midianite merchants (Gen. xxvii.); Jethro, priest of Midian, was the father-inlaw of Moscs (Exod. iii.). The M. frequently united with Moab against the Israelites (Num. xxii.). were crushed by Gideon (Judges vi.-

were crusned by Gideon (Judges vi-viii.). Their national god was Baal-Peor. See Sir R. Burton's Midian Revisited. 1879.
Midland Rallway of England, The, established in 1844, being an amalga-nation of the North Midland, Mid-land and Counties, Birmingham and Derby, and other lines. In 1868 the system was extended from Bedford to London, the Midland trains having to London, the Midland trains having reached London from previously Hitchin on the Great Northern lines.

but the fomales of some minute In England the company owns species of the genus Ceratopogon 1416; m. and has a part share in have the mouth highly developed, 283; m. more of rails. The chief 2831 m. more of rails. The chief offices are at Derby. The main liae offices are at Derby. The main nae runs from St. Paneras (London terminus) to Carlisle, serving the pricipal towns of the Midlands, West Riding, and Manchester. There is also an Irish section, the Belfast and Northern Connties system having been acquired in 1903, with a total learth of 2634 m. and partial owner. length of 2631 m., and partial owner-ship of 451 m. (County Donegal Rail-way). There are large docks at Hey-sham, Lancashire, for the crosssham, Lancashire, for the cross-channel service between England, Belfast, and the Isle of Man. In 1912 they sought parliamentary powers to absorb the London, Tilbury, and

Southend Railway. Midleton, William, St. John Brod-rick, ninth Viscount (b. 1856), an English statesman, educated at Etoa and Oxford. From 1880-85 he was M.P. for W. Surrey on the Conserva-tive side, and from 1885-1906 repre-sented the Gulldford division of Surrey, From 1886-92 hewas Financial Secretary to the War Office; Under-Secretary to the War Office; Under-Secretary of State for War from 1895-98; Under-Secretary of State for Foreign Affairs, 1898-1900; Secretary of State for War, 1900-3; Secretary of State for India, 1903-5; Secretary of State and since 1907 alderman of the London County Council. He suc-London County Council. ceeded to the title in 1907.

Midlothian, sec EDINBURGHSHIRE. Midnapur, cap. of a dist. of the same name in the Bardwan dir. of Bengal, India, on the Kasai R. The trade is largely in indigo, silk, and

briggs, in indigo, silk, and brass and copper ware. Pop. 34,500. Midnight Sun. At the summer solstice, about June 21, the sun does not set but sinks to the N. point of the horizon at midnight at the Arctic Circle. Circle. At North Cape in Norway it is visible at midnight from May 12 to June 29. This phenomenon is called the M. S., and the N.W. coast of Norway the 'land of the midnight sun.' Owing to the Inclination of the rotational axis of the earth from the normal to the orbit, the sun is constantly visible during the summer at and within the Arctic and Antarctic circles for a period of forty-eight hours to six months, according to distance from the poles. Midrash, the oldest Hebrew ex-position of the O.T. which, for

1500 years after the exile, accumulated from the explanations of lated from the explanations of scriptural passages and became the basis of rabbinical teaching. It was divided into the 'Halachah. which dealt with civil and religious law and ordinances, and the 'Haggadah, the whole body of the narra-tive of the O.T.; to this latter part Steinschneider, Jewish Literature, of Savoy. 1857.

Midriff, see DIAPHRAGM.

Midshipmen, young men ranking the highest of the first class of petty officers on board a ship of war; their duty is to pass to the seamen the orders of the captain or other superior officer, and to superintend the performance of the duties so commanded. They are educated for their profession at the Royal Naval College. By the regulations of 1833, the whole number allowed to be entered on board a ship of war varies according to the rate of the latter. A passed midshipman is ready for promotion to the rank of lieutenant.

Midsomer Norton, a par. 9 m. S.W. of Bath, Somersetshire, England. It has a Roman Catholic college (1814). There is trade in coal. Pop. (1911)

7300.

Midsummer Day, June 24, the Mieris, Frans (1689-1763), the summer solstice, and one of the four Younger, the son of Willem, and also Midsummer Day, English term days. John the Baptist's Day. JOHN. EVE OF.

Midwifory (O.E. mydwyve, from A.S. mid, with, and wif, woman, properly the woman or wife with or van Zeeland en heren van Holland,
attendant upon a woman in childbirth) deals with the care of women
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in child-left with women with with women with in childbirth. M. existed as far back of Frans the Elder, was a genre as history goes; it existed among the painter like his father, whose pupil he ohildren of Israel, and among the was, but his work is inferior, ancient Greeks it reached a high state Migliara, Giovanni (1785-1 ancient Greeks it reached a high state Migliara, Giovanni (1785-1837), an of excellence. In the middle ages the Italian painter, born at Alexandria, science of M. fell into decay, but in and studied under Brera and Galeari. the 16th century several works were He painted views of towns and build-mubbled across-state. published cnumerating principles. principles. As a strict medical science, M. dates

18th century, previous t matter was left as strictly province. To day the of midwives by the sta

therough, and training cates are essential to all who practise the tn. of Cantanzaro, on the R. M. The Midwives Act of 1902 regulated the craft, and gave power to the local authorities to exercise the necessary control over the M. of their M., the engraver (1806-68), born at district. districts. The central board has the right to right to delete names from the register of those who do not satisfy the the regulations.

Miechowitz, a tn. in the prov. of Silesia, Prussia, 3 m. W. by N. of Bouthen. It has deposits of zine and

iron. Pop. 9269.

Miedzyrzec, a tn. in the gov. of edlec, Russian Poland, on the

the term M. is usually confined. See painter to Charles Emmanuel, Duke

Mier, a tn. in the state of Tamaulipas, Mexico, on the Rio Grande del Norte, 80 m. E.N.E. of Montcrey. Pop. 7000.

Mieres, a tn. in Spain, in the prov. of and 9 m. S.E. of the city of Oviedo. It has coal, iron, copper, and cinnabar mines, and chemical factories.

18,000. Miereveld, Michel Jansen (1568-1623), a Dutch painter, born and died at Delft. He studied under the en-Wierix, and Jerôme painter Blocklandt. He produced an enormous number of careful portrait-

and a few interiors. Mieris, Frans (1635-81), called the Elder, a Dutch painter, born at Delft, and died at Leyden. Hestidied under Gerard Douw. His works are mainly portraits and domestic scenes, and

are highly valued. Frans

It is also St. a gonre painter; but he is better Day. See ST. der neder-

-py in his 10 court Among momo of St. Am-Milan. a, Italy. N.W. of

Troyes, and studied under Vouet at Paris, and later at Rome. He painted portraits of Popo Alexander VII. and many Italian princes. In 1657 he was summoned to Paris by Louis XIV., and on the death of Le Brun succeeded to all the article profitions. ceeded to all that artist's positions.

Migne, Jacques Paul (1800-75), a French author and theologian, born He was ordained in at St. Flour. Krzna R. Pop. 15.000.

Miel, Jan called Giovanni dello
Vite (1599-1661), a Flemish painter, that he went to Paris and there
who studied under Andrea Sacchi at started the paper called L'Univers 1824, and soon afterwards published He excelled in his studies religiour. Ho then opened printing oral scones, hunting parties, works at Petit-Montrouge. Other of pastoral scones, hunting parties, works at Petit-Montrouse. Censes gipsies, etc. Ho became court works are: Encyclopédie théologique: logic latine: Patrologic greeque; and stations, especially that established Scriptura sacra cursus completus.

Mignot, François Auguste marie (1796-1884), a French historian, born at Aix in Provence. In 1822 he went to Paris and published his Histoire de la revolution française, 1824 (Eng. translation, 1826). In 1830, in conjunction with his friend Thiers, M. journal founded tho Liberal In 1836 he was admitted into the Academy. He published Vie de Franklin, 1848; Histoire de Marie Stuart, 1851; Charles Quint, 1854; Rivalité de François I. et de Charles V., 1872-75, and the romantic drama Antonio Perez et Philippe II., 1845-46 See Life (in French) by Petlt (1889).

Mignonette (Reseda odorata), a valuable and very sweet-scented garden plant, a nativo of N. Africa. The natural colour of the racemes of flowerets is yellowish green, but there are reddish hued varieties.

Mignot, Louise, see Denis, Louis

MIGNOT.

Migraine, or Hemicrania, terms employed to denote a group of symptoms of which the most distressing is a severe beadache. The disease is paroxysmal in character, and usually commences with a dull aching on one sido of the head between the cheekbone and the temple. The paln grows gradually more intense, and the patient develops hyperesthesia, or excessive scusibility. There is also a painful degree of nausea, often leading to vomiting, and the patient may complain of various pains, seated in widely separated parts of the body. In many cases there are indications of hysteria, and little reliance can be placed upon the statements of the patient, who may suddenly recover and appear in quite good bealth after having been apparently in a stato of extreme exhaustion a few minutes before. Visual disturbances and illusions are characteristic. Little is known of the cause of M. It may be simply a form of neuralgia in which the optic nerve is involved. It is put down by some to eye-strain, though many cases show no history of anything approaching excessive uso of the eyes. Sir W. Gowers looks upon it as a form of epilepsy. It is common in, though by no means confined to, individuals of a highly strung and badly balanced nervous constitution.

Migration of Animals, a periodical movement from one district to another, mainly regulated by the food supply. It occurs in a large variety of animals, but most consistently among blrds; in fact, it is believed that nearly every bird migrates in some part of its range. Much valuable information has been collected in recent years by the work | Miguel immediately overthrew the

Patrologia cursus completus; Patro-of bird marking and observation in Heligoland by Herr Gatke. Large numbers of birds are caught and liberated after metal rings have been fixed on their legs, the return of which with particulars and date of capture. are invited. Apart from the enormous distances which many blrds have been proved to travel, one of the most remarkable facts clucidated is that birds of a species (e.g. skylark) some-times cross in their line of M. Some settling in districts which others have just left. The regularity of migratory movements is wonderful in such birds as the puffin or the swift, but spasor irregular Ms. occur on modie various occasions most notably in 1863 and 1888, when Pallas's sand grouse, a native of the plains of Tar-tary, invaded Britain in great nun-Similarly the crossbill and the waxwing make occasional incursions. Though it is scarcely credible, more than one species of Lepidoptera annu-ally migrates over the North Sea. Crabs and lobsters and some niclluses are known to move considerable distances to fresh feeding grounds. A number of fish (e.g. the salmon) are anadromous in habit, that is, they live in tho sea, but enter fresh water to spawn and afterwards again descend to the sea; while on the other hand the eel spawns in the deep sea, and does not return, the young ontering the rivers as elvers. In the scarch for safe breeding grounds, most of the aquatic mammals migrate long distances from tbelr usual haunts. Many other mammals make fairly regular Ms. movements being regulated their primarily by the changes of the scasons.

Miguel, Johannes von (1829-1901), Maguel, Johannes von (1829-1901).

a German statesman, born in Neuenhaus. Hanover, and educated at Heidelberg, and Göttingen. In 1864 lie was elected a member of the Hanoverian Diet, and in 1888 he entered the Reichstag, and in 1890 became Prusslan Minister of Finance, showing himself an able funcier and ing himself an able financier, and securing the adoption of a new tax system which both benefited the working classes, and Increased the revenue.

Miguel, Dom Maria Evaristo (1802; 66), the usurper of the thronc Portugal, was born at Lisbon, the VI. Hc third son of King John plotted the unsuccessfully throw of his father and the con-stitution of 1822. In 1826 his of 1822. stitution of 1822. In 1826 his brother, Dom Pedro, succeeded to the throne of Portugal, but abdicated in favour of his young daughter, In Maria, whom he betrothed to Mignel, who had been appointed regent.

constitution, and had himself pro-claimed king in 1828. After a six years' struggle he was defeated and banished by Pedro.

Miguelturra, com., Now Castile, Spain, in the prov. of, and 3 m. S.E. of the city of, Ciudad Real.

Pop. 6800.

Migulinskaya Stanitsa, a vil. in the ter. of Don Cossaeks, Russia, on the l. b. of the Don, 220 m. E. by S. of Kharkov. Pop. 30,000.

Miharu, a in. in Japan. 145 m. N.N.E. of Tokio. Pop. 6000.

Mijas, a in. in the prov. of, and 16 m. S.W. of the city of, Malaga, Spain.

Pop. 6500. Mikado, the former title of the emperors of Japan, for which the Chincse 'Tenshi' (Son of Heaven), or 'Tenno,' has recently heen substituted in general uso. The present |

M. in lin

having begun to reign in 660 B.C. Mikania, a largo genus of evergreen climbing plants (order Composite), natives of tropical America. M. scandens will grow on a trellis in the

op^he gov. and

Russia. has tanneries, candle factories, and

musery gardens, Pop. 10,000.

Mikkelsen, Capt. Einar (b. 1880), a
Danish polar explorer; in 1907 was
instrumental in helping to disprove
the polar land theory as in 72° N.
lat. and 150° W. long, a sounding 339
fathous foiled to reach the hottom fathoms failed to reach the bottom. In 1909 M. and Iverson set out in the Alabama in search of Mylius Erichsen's records, the main body of the expedition returning without thom. Their safety was despaired of, but after accomplishing their object they reached Europe in 1912, after spending the previous winter on Bass Rock. See M.'s Lost in the Arctic (1913). He has also published Conquering Arctic Ice.

Miklosich, Franz von (1813-91), a Slavic philologist, born at Lutten-berg, Styria. From 1850-86 he was professor of Slavic philology in the university there. His chief works are: Vergleichende Grammatik der slawischen Sprachen (1871-79); Lexicon Palæoslovenico Græco Latinum (2nd ed.), 1865; Etymologisches Wörterbuch der slawischen Sprachen, 1886; Allslowische Lautlehre (3rd ed.), 1878.

Miknas (in Moroeco), see MEKINEZ. Mikultschütz, a vil. in the prov. of Silesia, Prussia, 6 m. W. of Beuthen. Pop. 14,184.

Mila (ancient Milevum) a tn. of Algeria, in the prov. of, and 27 m. N.W. of the city of, Constantine. Pop. 10,000 (Europeans 400).

Milan (It. Milano): 1. A prov. of N. Italy, 1221 sq. m. in area, bounded by the rivs. Po, Ticino, and Adda, which are connected by numerous canals. The chief products are corn, cico, cheese, butter, cattle, silk, fruit, and wine. The surface is almost cntirely a fertile plain. Pop. 1,727,913. 2. The chicf city of Lombardy, stands on the R. Olona, in the centre of the great plain of Lombardy. The city, which is almost circular, is encompassed on three sides by walls and low ramparts; it has a circuit of about 77 m., and is entered by ten gates. Notwithstanding its great antiquity, M. possesses but few remains of its early splendid structures. Modern M. is one of the most opulent and populous cities of Italy; its best streets are regular, wide, and well paved, and kept with scrupulous care. M. abounds in churches worthy of note; of these, the principal is the famous Gothic cathedral, the Duomo, which, with the exception of St. Peter's in Rome, is the most magnificent ecclesiastical structure of Italy. Within it Napoleon was crowned king of Italy Besides the Duomo may be ln 1805. mentioned the church of St. Ambrose (founded by that saint in the 4th century), the most ancient in M., containing inscriptions, sarcophagi, and monuments full of antiquarian interest; and the Dominican church of Santa Maria delle Grazic, which contains in its refectory the famous 'Cenaclo,' or 'Last Supper,' by 'Cenaclo,' or 'Last Leonardo da Vinci. the Among secular buildings of M., the most noteworthy is the magnificent Brera Palace, now used as a museum and library; it has also attached to it an observatory and a botanical garden. The charltable institutions are numerous and splendidly endowed; the Ospedale Maggiore, or Great Hospital, founded by the ducal house of Sforza in 1456, accommodates 2000 patients.

Scala, which can accommodate 3600 spectators. M. carries on an immense inland trade in grain, rice, wine, and cheese, and has considerable manufs. of silk goods, ribbons, cutlery, and porcelain. Pop. 599,200.

Milan I. (1854-1901), a Prince of

Servia from 1868-82, and King of Servia from 1882-89, was born at Jassy, in Roumania. On the assas-Jassy, in Roumania. sination of his uncle, Prince Michael Obrenovitoh (1868), M. was pro-claimed Prince, and ruled under a regent till he came of age in 1872. In 1876 he allied himself with Russia, and declared war against Turkey, winning the independence

of Servia, and the kingship for himself in 1882. In 1889 he abdicated in favour of his son, Alexander, and retired to Paris. In 1894 he served as commander-in-chief of the Servian army for a short time. He died at Vienna.

Milanion, see ATALANTA.

Milasa, or Milas, a tn. in Turkey, Asia Minor, 84 m. S.S.E. of Smyrna; a centre of carpet manuf. Pop. 13,000. Mila y Fontanals, Manuel (1818-1884). a Spanish scholara and authority

1884), a Spanish scholar and author. Hc studied first at Barcelona and then at Cervera, obtaining a pro-fessorship of literature at the Uni-versity of Barcelona when 27 years old. Amongst his publications may be mentioned De la Poesia heroico-popular castellana (1873), and his treatise De los trovadores en España.

Milazzo (ancient Mylæ), a seaport tn. in the prov. of Messina on the N. coast of Sicily. The older portion of the town rests upon a hill, whilst the more modern portion occupies an isthmus. There is a good harbour, and the principal exports are tunny fish, fruit, silk, olive oil, and wine. Garibaldi defeated the Neapolitans in 1861. The Gulf of Milazzo extends for 16 m., and has been the scene of

many naval engagements.

Mildew, a name for a variety of microscopic parasitic fungi. Some Ms. arc of very serious economic importance. For example, American gooscherry M. was not observed in Britain until the year 1900, but since then it has spread throughout Northern Europe and is now seriously Northern Europe and is now seriously impeding the cultivation of goose-berries. Rose M., strawberry M., and hop M. are allied species. Treatment with sulphur in powder or in solution as a salt checks the spread of most Ms. Mildmay, Sir Walter (1529-89), born at Chelmsford. He became M.P. at the age of thirty-three, and was made Chancellor of the Exchequer thirteen years later. He was the founder of Emmanuel College, Cambridge

Cambridge.

Mildura, an irrigation dist.

Victoria, Australia, is 375 m. distant from Melbourne. Pop. 4000.

Mile (from Lat. mille, a thousand), was originally a Roman lineal measure of 1000 paces (see PACE). It has long been used as a measure of length English-speaking countries, but with varying meanings. Similarly, on the Continent of Europe the length of the M. varied with each country, often with each district, being usually some modification of the Roman M. The length of the legal M. in the British empire and the United States of America is now 1760 yds. For a nautical mile see KNOT and Log.

Mileage, in U.S.A., is compensation for travelling expenses allowed to public officers travelling to the seat of government. The members of Congress are allowed M. at the rate of 20 cents per mile to and from the seat of government, the distance usually allowed being the shortest route. In addition to this members of Congress are paid \$7500 per annum. All European countries now compensate the members of their legislatures by payment of salary, or allowing travelling expenses, or both.

Mile End, a par. of Stepney, co. of London, England, divided into New Town and Old Town, with respective

pops. of 11,300 and 107,600.

Miles, Sir Herbert Scott Gould,
K.C.B., C.V.O. (b. 1850). He entered
the army in 1869; colonel, 1893;
served in S. African War as deputy adjutant - general; quartermaster general of the forces, 1908-13; and

governor of Gibraltar, 1913. Miles, Nelson Appleton (b. 1839). an American soldier, born in West-minster, Massachusetts. He entered the army in 1861 and served with the Federals in the Civil War. became brigadicr-general of volunteers in 1864, three years later holding the same position in the regular army. In 1895 he became commanding general of the U.S.A., in succession to General J. McA. Schoffeld, and was conspicuous in successfully dealing with the Indian outbreaks of the Cheyennes and Comanohes, the Sioux in Montana, the Nez Perchés, and the Apaches. In 1898 he directed the military operations of the war with Spain. He retired from active service

Spain. He retired from active service in 1903. He published: Personal Recollections; Military Europe; and Observations Abroad.

Mileto, a tn. in the prov. of Catanzaro, Italy, 40 m. N.N.E. of Reggio; destroyed by an earthquake in 1908, when 2300 lives were lost.

Miletus: 1. Son of Apollo and Aria of Crete; fled from Minos to Asla, where he built the city of Miletus.

where he built the city of Miletus. Ovid calls him a son of Apollo and Deïone, and hence Deïonides. 2. Onc of the greatest cities of Asia Miner, belonged ter

tically to I most of the

confederacy in flocks, and the city was celebrated for its woollen fabries, the Milesia vellera. At a very early period it became a great maritime state, and founded numerous colonies. It was the birthplace of the philosophers Thales, Anaximander, and Anaximander, and colonies and of the birthplace of the philosophers. menes, and of the historians Cadmus and Hecatæus. It was the centre of the great Ionian revolt against the Persians, after the suppression of

which it was destroyed (494 B.C.). It soldier's military education, as such, recovered sufficient importance to varies according to the branch of the onpose a vain resistance to Alexander the Great, which brought upon it a second ruin. Under the Roman empire it still appears as a place of some consequence. Its site is now deserted.

Milfoil, or Yarrow (Achillea millifolia), a plant with thrice-pinnatifid leaves and white, pink, or purple flowers (order Composite). It is

common on pastures. Milford: 1. A parl. bor. and seaport of Pembrokeshire, S. Wales, on the Haven, 273 m. from London. It has passenger and cattle traffic with Irisli pc---

ing, sh (1911)

co., Massachusetts, U.S.A., 17 m. S.E. of Worcester, on the R. Charles. Has important granite quarries, and manufs, boots and shoes, thread, silk, straw goods, and machinery. Pop. (1910) 13,055.

Milford Haven, a natural harbour of Pembrokeshire, S. Wales, running inland for 17 m. and varying in breadth from 1 to 2 m. It is the finest harhour in Britain. It has a depth of from 15 to 19 fathoms.

Millord Sound, a flord on the S.W. coast of South Island, New Zealand. extending for 10 m. and about 1 m. in hreadth. It has numerous waterfalls.

Miliana, a tn. of Algeria, con-nected by rail with Algiers, 56 m. W.S.W. Has a healthy elimate, and is 2900 ft. above sea-level. Pop. 8500.

Military Education and Military Schools, Under this heading may be treated the education, not only in subjects appertaining to the art of war, but also in general knowledge of military officers N.C.O's.. and of military officers, N.C.O's., and

Men and N.C.O's .- In every regiment and garrison, achools are established for soldiers under the supervision of the Director-General of tion. The minimum Military Education. of knowledge for a recruit is reading, writing from dictation, and enough Medical

arithmetic to ensure of his accounts. Ever attend classes in thes six months, or until h a fourth-class certificat examination for a thi

cate, requiring a higher degree of knowledge, must be passed before hidden Medical Service, respectively. Here the rudiments of the required second-class before the rank of sergeant is attained, and a first-class practical training given in the field before an N.C.O. can be recompleted in the recomplete of the recomp mended for a commission. examinations are conducted and t

schools supervised by district

spectors and sub-inspectors.

service he is in. In the infantry the recruit receives, at least, two and a half months' training at the brigade depôt. He then joins his battalion, and has three months' training drill, marching, sentry duties, A course of instruction in in etc. including twenty-seven musketry, daya' target-shooting, follows, and the recruit is then a 'trained soldier.' An annual training in reconnoitring, bridging, bivouacking, field-fortification, etc., lasting for slightly over three weeks, is gone through by each company, whilst each regiment also annual manœuvres at the exercise.

Various tactical route-marching, etc., are practised during the winter. The process of training is very similar for the cavalry, artillery, and engineers, save that the knowledge obtained during the first course is different in each branch. Thus the cavalryman learna stable-work, fencing, riding, saddlery, etc., the artilleryman is instructed in foot drill, gymnastics, gun and ammunition drill, riding, driving, etc.; and the engineer in drill, musketry, field-fortification, bridging, etc. All trained soldiers have an annual training of fourteen days in field service and tactics, etc., with their squadron, battory, or company, followed by battalion, brigade, and divisional training. If a soldier shows any special aptitude in such subjects as signalling, range finding, etc., he attends a course of lectures at one of the technical schools, and may qualify for the post of regimental instructor. Instruction is also given in various crafts, etc., to enable time-expired men to obtain employment when they leave the army. The children of soldiers generally attend the garrison school when their parents are married with leave.

Officers.-The Royal Military Academy, Woolwich, the Royal Military College, Sandhurst, and the Army Medical School, Notley, are the School, Netley, who who who wission in:

Engineers or Royal e cavalry, infantry, orps, Indian army ian regiments: or aledical Service and

seience. ducation

The proper is only just commencing. The

mental duties and drill; before promotion to the rank of licutenant, a second licutenant must pass examinations, both written and practical, in military law, drill, cte The sine qua non in an officer is ability to com-The sine mand, and if the three senior officers of a second licutenant's unit are not satisfied as to his ability in this respect, he may, after three years' scrvice, be romoved from the army. Before a lieutenant can be promoted to a captain or a captain to a major, a further and more difficult military examination must be passed, whilst practically all officers attend whichever of the detailed courses in musketry, gunnery, signalling, etc., happens to suit his talent and inclination. An officer must enter the staff college before he is thirty-seven If he wishes to do so. As most of the best men in the army enter it, such a procedure is a great help to promotion. A major must pass an examination and must satisfactorily direct the operations of a mixed force in the field before he can bo promoted to the rank of lieutenant-No further examination is colonel. held on promotion to higher ranks than lieutenant-colonel. The establishments where officers and men already in the service may be said to form a separate class. They comprise: The Staff College at Camberley, the School of Gunnery at Shoeburyness (the Artillery College), the School of Military Engineering at Chatham, the School of Musketry at Hythe (the Schools of Signailing and Range-Finding, the Army Veterinary School, the School for Auxiliary Cavalry), a school for the other Cavalry), a school for the other auxiliary forces, and the Royal Mili-tary School of Music at Kneller Hall. For details as to the lengths of study, ror accens as to the lengths of study, sees, qualifications, etc., of the above, character of soldiers as well as of see articles under their separate headings. See also under SANDHURST, WOOLWICH, and NETLEY for the Royal Military College, Royal Military College, Royal Military Cademy, and Army Medical orders of knighthood.

School, respectively.

Military Police, the name given to think branch of the police forms which

Military Engineering, School of, Chatham, is the centre of instruction in the army for the various engineering subjects. On appointment from the Royal Military Academy, officers remain at this school for a period of two years. The courses of instruction, of which some must be undertaken by all officers and men of the Engineers, deal with the construction and estiof practical fortification, mating milisurveying, submarine, and mu-tary mining, bridging, ballooning,

first things to be learnt are regi- other branches of the service, ejementary courses in 'field-working' and surveying are held periodically, A commandant and assistant commandant, brigade-major, and secretary form the staff, assisted by instructors, assistant instructors, and a quartermaster.

Military Frontier, see CROATIA-SLAVONIA.

Military Law is laid down in the Manual of Military Law, issued under War Office authority, as being 'the law which governs the soldier in peace and in war, at home and abroad.' At all times and in all places the conduct of officers and soldiers as such is regulated by M. L. As regards Great Britain, this definition is too wide somewhat although accurate as regards most In the latter continental countries. there is also, as a rule, an intermediate state recognised, an état de siège, which may be declared for a certain because of domestic inperiod, surrection, etc., by legislative enactment. In war time in all countries the military authority is supreme. In British dominions the case is somewhat different, as the soidier is also a citizen. The main authority for M. L ceg_I

tho and Volunteer Acts, various royal

warrants, regulations, etc.
Military Orders, religious associations which aroso from a mixture of the religious enthusiasm and the the religious enthusiasm and the chivalrous love of arms which almost equally formed the characteristics of medieval society. The first origin of such associations may be traced to the necessities of the Christian residents of the Holy Land, in which the monks were compelled, by the necessity of self-defence, to assume the character of soldiers as well as of monks. These religious associations have at various times been abolished

that branch of the police force which partakes more of the nature and undertakes more of the operations of the military forces than the ordinary constabulary. The members of this branch are mounted, and patrol fairly largo areas of country; when necessary, they assist or are assisted by the ordinary police force. The Indian Police Force, the officers of which are chosen by competitive in Postard has some examination in England, has some of the characteristics of M. P. It is chemistry, photography, etc. Ordin-a mounted force, and has very much ary military duties and shooting are greater authority than the English also taught. For officers and men in police, whilst the duties are fraught

with more danger, and its organisa-| War, it was carefully organised for tion is consequently on military lines.

Military Prisons may be divided into two classes, those for soldiers discharged from the sorvice ignominy, and those for ordinary offences. Of the former class only two now remain, at Dover and Curragh. and in many cases a civil prison is now used for such offenders. For breaches of discipline for which the punishment is imprisonment for more than fourteen days, central and district prisons are appointed, whilst minor offences the harrack cells or detention barracks are used

Militia (Lat. miles, a soldier) had the acquired meaning of the domestic force for the defence of a nation, as distinguished from the regular army. The M. was a constitutional force raised under the sanction of parliament, in which the people-in theory at least-waged their own bodies for the defence of their own soil, and in which they deputed the sole leadership and command to the sovereign and the crown nominces. Organised by counties and cities, it was essen-tially a local force: the property qualification for its officers connected it with the land, while the command of the sovereign offectually combined in it the interests of the three estates. Under the Anglo-Saxons, no special organisation being adopted, efficioncy was rarely attained. This the nation found to its cost when the Dancs overran it during Alfred's reign. That great king, to prevent a similar occurrence, established the M. or furd, making land the basis of numbers, the family system that discipline. Each section of the com-munity had not only to furnish its quota in time of war, but also to provido arms, keep them in repair, and to undergo so many days' training every year. When the crown began

the defence of the kingdom. Several M. Acts were subsequently passed with a view to consolidating the M. laws of England, Scotland, and Ireland. In practice, M. were raised by voluntary recruitment; but should volunteering fail, a levy by ballot could be made upon all the inhabitants of the locality between the ages of eighteen and thirty-five. The power of making this ballot always exists, and would have by law to be enforced, but for the Militia Ballot Suspension Act, which, when the measure is unnecessary, is passed from year to year. Many classes are exempt from the ballot, as peers, soldiers valuntages veces are resulted. soldiers, volunteers, yeomanry dent members of universities, clergymen, parish schoolmasters, articled clerks, apprentices, seafaring men, crown employes, free watermen of the Thames; in England, any poor man with more than one child born in wedlock; in Scotland, any man with more than two lawful children, and not possessed of property to the value of £50; In Ireland, any poor man not worth £10, or who does not pay £5 per annum for rent, and has more than three lawful children under the age of fourteen. The M. were bound to assemble annually for training purposes; and the government can embody the whole or part of the force at any national crisis. The regiments were embodied almost without exception during the Russian War of 1854-56, and to a considerable extent at the time of the Indian Mutiny (1857-59). They could not be sent out of the kingdom, except they volunteered, and then only by special permission of parliament. A M. volunteer received bounty, payable partly on joining and partly in instalments after each training period. The celebrated Local Militia was into contend with the Norman barons stituted in England and Scotland in

1816. In 1908 in the reorgan. Lord Haldane, partly by the b forms drafts and partly by which now

and substituted 'Trained (commonly | forms our second line. called Train) Bands, to the number of 160,000 men, a force partaking of the nature of M. and volunteers. During the civil war of Charles I., the trained bands or M. sided readily

See ARMY. The production of M. as a Milk. secretion of the female's mammary glands is the chief characteristic of the great animal division mammalia. For young and growing animals it with the parliament. After the Restoration, the loyal parliament of therefore, a highly complex mechanical mixture of a number of substances the M., and this organisation formed which vary not only with individuals which vary not only with individuals. the M., and this organisation formed the basis of the M. until 1908. The M. was much neglected until 1757, and breeds of domestic animals. When, a large portion of the regular army being absent in the Seven Years' superior to any other for the artificial

to be the consumption of each person. Although the dairy industry is pro-bably almost as ancient as civilisation itself, the greatest progress in the scientific study and treatment of M. has taken place since about 1890. With the greater knowledge and with the rapid increase of its consumption, many of the chief enacted States have important legislation as to its production and disposal. More recently it is in its connection with tuberculosis that the M. supply has received much attention, and the only check upon most stringent, far-reaching legis-lative action is the undoubted fact that the supply would rapidly dimin-ish if the dairying industry were much hampered by too sudden and too drastic new regulations. On May 1, 1913, the existence of tuberculosis in dairy cattle became compulsorily notifiable, slaughtered animals being compensated partly by the Treasury and partly from the local rates. This promises to have of the British M. supply. The hous-ing of cattle, which has no less bearing upon the question, is also undergoing steady improvement. At the same time, breeders of dairy cattle are working steadily for the production of deeper milking cows. Vast numbers of cows yield only about 500 gal. a year, and while on the other hand properly accredited yields of over 1500 gal. are not unknown, an increase of the average cow's yield to about 800 gal, would vastly increase the profitableness of the dairy industry, and so permit the production of M. under ideal sanitary conditions. Except when sanitary conditions. Except when the udder is diseased, M. at the time of drawing is probably always sterile. This freedom from the bacteria moulds and other organisms of decay should be continued as much as possible by the scrupulous exclusion of dust and dirt, the use of sterilised vessels, and by keeping the M at a low temperature until the M. at a low temperature until it reaches the consumer. In spite of about soventy-five years' work upon it by inventors, the milking machine is still very far from being in general

feeding of children, it is the M. of cows which is of chief economic importance. Its consumption in the United Kingdom is calculated to exceed 15 gal. per head per annum, while in the U.S.A. an average of about 26 gal. a year is estimated to be the consumption of each person. Although the dairy industry is probably almost as ancient as civilisation itself, the greatest progress in the scientific study and treatment of M. has taken place sinco about 1890. With the greater knowledge and with the rapid increase of its consumption, many of the chief States have enacted important elegislation as to its production and disposal. More recently it is in its connection with tuberculosis that the M. supply has received much attention, and the only check upon most stringent, far-reaching legislative action is the undoubted fact that the supply would rapidly diminsish if the dairying industry were much hampered by too sudden and the color of the many of the color of the water employed above that of the water employed into the railway churn, usually constructed to hold 17 gal., and, while the proof against dust, rain, or plate the M. runs direct from the cooler above that of the water employed into the railway churn, usually constructed to hold 17 gal., and, while a proof against dust, rain, or plate of the many of the chief state of the many of the chief state of the water employed above that of the water emp

The delivery in glass bottles scaled with air-tight cardboard discs which can only be used once is on the increase. Under the Food and Drugs Act, 1899, the Board of Agriculture were empowered to state a standard for M. Contrary to the general idea, there is no such thing as a legal standard, but if on analysis M. is found to be inferior to the Board's presumptive standard, it rests with the seller to prove that the M. was as yielded by the cow, and was not adulterated. This standard assumes the minimum percentage of solids, not fat, to be 8.5 per cent., and of fat 3 per cent. Though pure M. has been known to fall far below these minimum, authorities agree that the standard is a fair one, and that poorer M. is not the food it is expected to be.

cow's yield to about 500 gal, would the food it is expected to be vastly increase the profitableness of the dairy industry, and so permit the production of M. under ideal sanitary conditions. Except when the udder is diseased, M. at the time of drawing is probably always sterile. This freedom from the bacteria moulds and other organisms of decay should be continued as much as possible by the scrupulous exclusion of dust and dirt, the use of chemical steriles of various and the only methods of preservation apart from the method of keeping clean and condensing. There are numerous devices for performing are numerous devices for performing at the M. at a low temperature until it reaches the consumer. In spite of about soventy-five years' work upon it by inventors, the miking machine is still yery far from being in general use. In April 1913, the Royal Agricultural Society conducted a large and important competition, which brought to light great improvements in these machines, which, with the growing scarcity of labour, the food it is expected to be.

germinate. After the third heating, Mts., near the N. boundary of if proper care has been taken to Montana, and draining part of prevent the admission of further Canada. Total length about 475 m. spores or organisms, the M. will keep Milk Sugar, see Lacrose. for an indefinite period. Sterilised for an indefinite period. Sternsed M. is slightly brown in colour and hardy annuals and perennials and las a sweet flavour. The M. fat hardy and tender evergreen shrubs, globules collect together and form a The common M. P. vulgaris, occurs cream which cannot he redistributed in the M. For young and invalid persons this is very indigestible. Condensing is performed by evaporating the water at a comparatively low (P. calcarea), P. amara, with small temperature under reduced pressure, and if the process of manufacture is rostte, and fleshy leaves in a rostte, and P. austriaca, with large carefully earried through and only pink flowers. Some of the hardy whole or unseparated M. used the process of the statement of the

product is a satisfactory substite Glave maritime.

The remarkable fact may here IALAXY.
mentioned, that in some dairy fau Spinning and ing districts the demand from towns Manufacture, Flour-Milling, and for M. is so great that the labourers' families are compelled to use con-densed milk. A recent invention continues the process of evaporation until the solids are left as a fine powder, which has a pleasant, sweet taste, and ean be kept for a long time without deterioration. It is mixed with water for use. Much

after cooling a cult Bulgaricus is introd is kept covered and temperature of 100° The soured M. th

about as thick as ordinary butter- South Pole. In 1997 he edited the milk; its flavour is pleasant and fourth edition of the International distinctive, and it is undoubtedly a Geography. very valuable food and gastric eorrective.

Milk Fever, the name given to the hours by the use of cooling draughts and by encouraging

free flow of milk. Milk Fever, in animals. Тb is the chief subject of this derange and other political economists. In ment, and is rarely attacked before 1821 he published the famous Eletbe third ealving. Its actual cause ments of Political Economy; in 1829 is uncertain, but is no doubt related the published the famous of the to the authority of the ment of the to the artificial treatment of animal. Schmidts, a German, introduced a remarkable treatme

tressing symptoms appear, the udder rose to be examiner, with a salary of is milked out, and pure oxygen and filtered air are injected or pumped into each quarter of the udder.

Milk River, in the U.S.A., a trib. of the Missouri, rising in the Rocky Hish theologian, born at Hardendale,

Mili

Milk Sugar, see Lactose. Milkwort (Polygala), a genus of on ehalky heaths and bears terminal raccines of white, pink, or blue flowers. Other British species inelude the large flowered Chalk M.

WOOL. Mill, in law. The owner of a mill is entitled to the use of a stream undiminished in volume: if owners above

interfere, he can sue them. Mill, Hugh Robert (b. 1861), a Scottish chemist and geographer. born at Thurso. In 1884 he became physicist and chemist to the Scottish nitized with water for use. In the physicist and characteristic attention has recently been attracted marine station at Granton, and three by sourcd M., which for many cenyears later was appointed a univerturies has been used in E. Europe sity extension lecturer. He has and Asia, and to which Professor Metchnikoff attributes the remark-lable longevity of peasants. Tho M. is after cooling a cool esident of the Royal

Society, and has following works: The The Realm of Nature, and The Siege of the In 1907 ho edited tho

Mill, James (1773-1836), a philo-pher, came to London in 1802. sopher, came to London in 1802. and in that year became editor of the Literary Journal, and later of the St. James's Chronicle. These papers febrile state sometimes occurring literary Journal, and later of the two or three days after childbirth. St. James's Chronicle. These papers frequently brought about by a chill. ceasing to exist in 1898, he earned It can generally be subdued in a few his living as a contributor to the -er reviews, and 'ia (1818). He

supporter of nd of Ricardo

n 1835 a Fraga bitter attack hilosopher.

which, with proper care, reduces 1819 he was given an official position loss to a minimum. When the dison the Board of Control on which he

shire, and was made chaplain to Charles II. Four years later he became principal of St. Edmunds Hall, a position be retained till his death, and in 1704 was made a prebendary of Canterbury. His famous Greek Testament, published in 1707, was the fruit of thirty years'

Mill, John Stuart (1806-1873), a philosopher, was the eldest son of James Mill, the bistorian of India. James Mill, the distoran of maia. Educated by his father, his studies embraced a range unusually wide. In 1823 he became a clerk in the India House, and was promoted until in 1856 he became the head of his dopartment, and two years later, when the government of India was transferred from the East India. company to the crown, he declined a seat on the new council, and retired on a pension of £1500 a year. He entered parliament as member for Westminster in 1865, but retired three years later. Ho was a founder westminster in 1805, but retired three years later. Ho was a founder of the Utilitarian Society (1823), and of the Speculative Society (1823), the published a work on Logic in 1843, and the well-known treatise on Political Economy in 1844. Among 3 books On

Books On arliamentary Representative The Subjec-His Auto.

biography appeared in 1873. In all his writings he showed great common and unbending sincerity. There is a Biography by Professor Bain (1882).

Milla, a genus of bulbous plants (order Liliacee). M. unifora bears white, lilac, or pale blue flowers in March. It needs a dry, sheltered,

March. It needs a dry, sheltered, gravelly position.

Millais, Sir John Everett (1829-96), an English painter, began to study art at Sass' school in London in 1838. In 1840 he passed on to the Academy schools, where he was awarded all the prizes. Ambitious of lifting native art from its dull lead of conventional mediogrity, he level of conventional mediocrity, he joined the Pre-Raphaolite Brotherhood with Holman Hunt, his friend. In his picture of Kcat's 'Isabella' (1849), in his 'Huguenot,' and above all in his universally admired 'Ophella' (1852), for whom Mrs. Rossetti was the model, he has nobly expressed the principles brotherhood. His home Of the

in Westmorland. In 1681 he be-Ruskin, meanwhile, was championing came rector of Bletchington, Oxford-A. with the rest of the Pre-Raphaelite band. Mrs. Ruskin, whom M. after-wards married, sat for his 'Order of the Release' (1853). The afterplow in 'Autumn Leaves' (1856) and the moonlight in 'The Eve of St. Agues' (1863) are two of his most splendid atmospheric effects. His finest pictures, such as 'The North-West Passage' (1874), 'The Boylood of Raleigh' (1870), 'The Rescue' (1855), the 'Ycoman of the Guard' (1877), and 'The Princes in the Tower' (1878), show a rare dramatic force and ability to express sentingent. In his lotter days he was most In his latter days he was most

famous as a painter of portraits.

Millar, John (1735-1801), a British professor of law, born at Shotts.

Lanarkshire. He became an advocate in 1760, the following year being appointed professor of law at Glasgow. He wrote The Origin of the Distinction of Ranks, and Historical View of the English Government from the Settlement of the Saxons in Britain to the Accession of the Ilouse of Steam

of Stuart.

Millard, Evelyn, an English actress, began in 1891 at Margate, where she appeared in a stock company. From 1891 to 1893 she was playing at the Adelphi, and the following year was with Sir George Margary born in London. Her stage career was with Sir George Alexander at the St. James, playing Cecily Cardew in The Importance of being in Earnest; Blanche Chilworth in Liberty Hall. and Princess Flavia in the Prisoner of Zenda. In 1898 she played Portia in Sir Beerbohm Tree's production of Julius Casar. In the same year of Julius Cæsar. In the same year she played in The Adventure of Lady Ursula. Under Louis Waller's Under management sho has played in M. Beaucaire, The Perfect Lover, Robin Hood, etc. In Mr. Granville Barker's recent production of Twelfth Night

she played Olivia.

Millau, a tn. in dept. of Aveyron,
France, on the Tarn. Manufactures
gloves and wool. It was formerly a Huguenot stronghold. Notre Dame and St. Francois, the latter with a Gothic belfry, are fine edifices.

Pop. 18,500. Millbank Prison. This prison was erceted on a site on which the Tate Gallery now stands, and was a direct outcome of the philanthropic teaching of Howard. The old vindictive or retributive theories of punishment found expression in prisons that were registrated to the control of the control brotherhood. His homely and relatively and naturalistic representation of the child Christ in 'The Carpenter's Shop' (1850) produced a very unstructed impression upon the critics, and even called forth an unmerited rebuke from Dickens.

cost erected the Millbank penitentiary. The system failed dismally; and there was a partial reversion to older methods. On the M. P. boing condemned as insanitary over twenty years ago, the buildings constituting it were demolished.

Mill-board, a tough, thick, and rigid board made from pulp. As in the case

and run into a tank: covered with a fine w up the pulp in a thir

then received on a felt band. Thence more modern times. it is wound on another cylinder, being compressed in the process. When the necessary thickness is obtained, it is again rolled to drain out water and compress the material, cut off, flattened, and dried. The finer quali-tics used by artists are bleached and

Milbrook, an eccles, par. of Cornwall, England, 31 m. W.S.W. of Plymouth. Pop. (1911) 3432.
Milbury, a tn. iu Massaclusetts, U.S.A., 7 m. from Worcester. Has

cotton and woolien mills, and manufs. publishing Poems, 1829; and Legends, thread, tickings, edge-tools, etc. Pop. 1835; he became in 1839 editor of the (1910) A75 (1910) 4740.

Milledgeville, a city of Baldwin Gcorgi-, seed o state seniten-

tiary. Pop. (1910) 4385. Millennium, a period of 1000 years during which it was believed the kingdom of Christ would be estab-lished on earth. The idea originated in Judaism, but it was also very popular among the early Christians, who looked forward to the Parousia, or second coming of Christ. Indeed, in the 1st century of the church, chiling (Gk. x/λω, thousand) was a widespread belief to which the books of Daniel and the Apocalypse gave authority; whilst such books as the Testament of the Twelve Patriarchs the Christian Sibylline Books, etc., and the writers, Papias of Hierapolis, Ireneus, and Justin Martyr gave vivid descriptions of the glory and magnificence of the M. According to them it would be a time when ali flaws in human existence would have vanished and perfect happiness pre-vail. But this period of bliss was to be preceded by great calamities and the triumph of the Messiah over Antichrist. The Roman empire was to be destroyed, Satan put in bonds, and the kingdom of Christ established, Velindre, near Llandovery, Carmar-

century, impressed by the arguments, when the righteous would arise from of prison reformers, accordingly pur- the dead and live, together with the chased land at Millbank, and at great surviving saints, with the Messiah in the New Jerusalem, a city which would literally descend from heaven. But lapse of time tended to stifle this belief, and when the Alexandrinian philosophers, and amongst them Origen, started the idea that there would be no final conflict between Paganism and Christianity, but a gradual spread of truth throughout of paper the material varies with the the world, dreams of chiliasm began quality; waste paper and wood pulp to fade. Millenarianism, however, give a poor quality, the better kinds had some revival at the period of the Reformation, being adopted by the Anabaptists, who regarded the Pope and in Cromwell's time

onarchy Men (q.v.) were It flourished, moreover, hirty Years' War, and in

See Corrodi's Kritische Geschichte des Chiliasmus (Zurich, 4 vols.), 1794; Callxtus, De

Chiliasmo cum antiquo tum pridem renato Helmol, 1692. Miller, Hugh (1802-56), a Scottish geologist, was born at Cromarty, where in 1860 his memory was honoured by a monument to his name. By trade M. was a stone-mason, and it was only by being a stern 'taskmaster of his own energies' that he acquired that literary style and scientific learn-Has ing which won him renown.

at of a bodied in The Old Red Sandstone, 1841. odded in Theola Hea Sanasione, 1841. Carlyle was delighted with his autobiography, My Schools and Schoolmasters, 1852. In politics M. was 'Whig in principle, Tory in feeling,' whilst his religious deals were bound up with the Free Church, which arose from the disruption of 1843. His suicide is directly traceable to excessive mental strain.

Miller. Joaquin (né Cincinnatus Heine Miller) (1842-1913), an American poet, born in Indiana, and spent his later boyhood in Oregon. For four years (1866-70) he was judge in Grant county, and later he visited Europe many times (1870-76), and also Klondyke (1897) and the Orient also Klondyke (1897) and the Orient (1899). He made his name with his passionate Songs of the Sierras. 1871, and besides writing other pocus and a melodrama, The Danites, published a History of Montona, 1886, and The Building of the City Beautiful, 1887, some ideas of which he attempted to put into practice in a codel comp put into practice in a social community on his estate.

Miller, William, see ADVENTISTS. Miller, William Hallows (1801-80), British mineralogist, born

thenshire, and educated at John's College, Cambridge, becoming a fellow in 1829. His chief work was on Crystallography, published in 1838.

Miller's Thumb, see BULLHEAD.
Millesimo, a tn. in prov. of Genoa,
Italy. 14 m. W.N.W. of Savona.
Noted for Napoleon's victory over the Austrians in 1796. Pop. 1500.

Millet, the seed of some species of Panicum, which are extensively cultivated in India and Africa, and also in Southern Europe, being especially well suited to growth in a dry, sandy soil. The seeds are round, and vary in the send in solution from the series and the series and the series and the series and the series are series and the series are series are series and the series are series and the series are series size and in colour from yellow to white, grey, brown, red, and black. M. is much used in food for poultry, pigeons, and eage birds.

Millet, Aimé (1819-91), a French sculptor, born at Paris; leaped into fame in 1857 with his statue of 'Ariadne,' which was bought for the Luxembourg, Paris. This was followed by Mcreury, now standing in the court of the Louvre, and the famous 'Vereingétorix,' a colossal statuo in beaten copper, at Alise-Ste.-Rcine in Côte-d'Or (1865). Other works are the 'Apollo' surmounting the Grand Opera, 'Tombeau de Baudin' and a monument of 'Dorian' at Père-Lachaise.

Millet, Francis David (b. 1846), an American artist, born at Matta-poisett, Massachusetts, U.S.A. He acted as correspondent of the London Daily News, Graphic, and New York Herald during the Russo-Turkish War (1877-78), and in 1898 went to War (1877-78), and in 1898 went to Manila as war correspondent for the Times and Harper's Weekly. In 1885 he was elected a member of the National Academy, New York. His best known pictures are 'Between Two Fires,' in the Tate Gallery, London; 'A Cosy Corner,' and 'At the Inn.' Among his publications are: The Danube, Capillary Crime and Other Stories, and Expedition to the Philipmines. Philippines.

Millet, Jean François (1814-75), a Freuch painter, was the son of a peasant of Grueby, near Gréville (La Manche). Like Burns, he turned to his art after toiling in the fields; in 1836 he became a pupil of Mouchel in

ears later cnoche in Paris.

he secured a notablo success with 'The Win-nowers,' exhibited at the Salon in 1848. 'Sowers and Binders,' 1850; 'The Reapers,' 1854; 'The Gleaners,' 1857 (now in the Louvre), 'The Angelus,' and 'Death and the Wood-cutter,' 1859, are some of his finest works. M. was a master in depicting the sombre melaucholy of work and the sombre melancholy of work and

St. I often emphasised by a twilight atmosphere most sensitively expressed.

Milletia, a genus of climbing trees and shrubs (order Leguminosæ) with pink and purple flowers.

Milliard, a word very rarely used nowadays, signifying a thousand millions.

Milligan, William (1821-92), a Scottish theologian, born in Edinburgh, and educated at the bigh sebool there, and at St. Andrews University, graduating in 1839. In 1844 he became minister of Cameron in Fifeshire, and in 1868 was appointed professor of biblical eritieism at Aberdeen University. Among his works may be mentioned, Resurrection, Ascension of Our Lord, Revelation of St. John,

of Our Loru, and Discussions, etc.
Millin, Aubin Louis (1759-1818), a
makeologist, botanist, and
Wa ho. French archæologist, botan numismatist, born at Paris. came professor of history and physics at the Ecole Centrale, and at the Lycée of Paris in 1794. His publica-tions include: Antiquités nationales; départeme-

Milliner . to design

trimmings (ribbons, lace, feathers artificial flowers, etc.), and is also applied to the art of making and trimining hats and bonnets. Origin ally the word meant 'Milan goods, sueb as textile fabrics, gloves, ribbons 'Milan bonnets,' needles, and cutlery Many articles of M. are sold by haber dashers and drapers. Milliaers are those who make and trim hats and headgear of all descriptions for women and children (as opposed to ' hatters, who make headgear for men), and are nearly always women. The most usual head-covering is the bat (for outdoor wear), consisting of a crown and a brim all the way round, both having innumerable varieties of shape and the particular size, according to fashion of the day. Straw is one of the commonest materials in uso (tuscan, leghorn, tagal, eliip, satin, straw, etc.), and may be had in all colours. Other mnterials for hats, toques, or bonnets, are silk, velvet, lace, felt, wool. and fur. Bonnets are worn ehiefly by elderly ladies. They are much more compact than hats, with a narrow brim fitting close to the head, and strings fastening under the ehin. They are perhaps less worn now than formerly, being often re-placed by toques. These usually have a swathed trimming and no project. ing brim. Shapes manufactured from straw, felt, or other ornamental materials which only need trimming and lining are called 'trimmed' hats, rustic peasant life—a melancholy while foundation (buckram) shapes

hats. Some shapes are manufactured wholesalc, but exclusive ones, such as ares old by high-class milliners, are all hand-made. The chief materials used for foundations are Spatra (espatra), made of woven esparto-grass backed by firm white muslin; buckram (black or white), a coarse, stiff muslin, and French net (black or white), for light headwear such as lace hats or dress caps. Slight covered wire (black or whito) is used to strengthen each section of the foundation. Bandeaux, designed to raise all or part of the headdress from the head, are less worn than they were formerly. linings are mostly of sarcenet or soft silk. The 'tip' is a section fitting iato the crown; the head-lining proper is fastened inside round the extremity of the crown where it joins the brim, and has a draw-string run through the opposite edge by which to pull it up. Bonnets for infants and children are made of very soft materials, and usually with only flannelette or book-muslin for stiffening. M. classes are frequently held in connection with the Polyteehnlo and other schools. See Madame Rosée, Handbook of

. . . . English archeologist, born in London of a Dutch family, educated at Westminster school. On account of his minster school. On account of his health he went to Italy, where he be-

guttotus, J. terrestris (sometimes called wire-worm'), and J. put-chellus. Trapping by means of buried roots and dressing the ground with lime or soot are methods of keeping Ms. in check.

Millom, a tn. of Cumberland, England, 9 m. from Barrow. smelters, red hematite mines blast furnaces. Pop. (1911) 8612 Has

Miliport, a watering-place on Great Cumbrae Is., Bute, Scotland. Has a good sandy beach and fine harbour. Pop. (1911) 1614.

covered by hand with velvet or drawn co., Kentucky, U.S.A., 80 m. S. of silk or chiffon are known as 'mado' Lexington. Here the confederates were defeated by the Union forces in 1862

Mill Stones. These consist mostly of sandstone and various kinds of grir. but they have the disadvantage of becoming smooth and thus necessitate dressing from time to time. The best stone to use is one which is hard and porous; perhaps the best stones ful-filling these conditions are the French burr stones. Of late years steel rollers have fargely displaced those of stone.

Milltown, a tn. in New Brunswick, Canada, on the St. Croix R., 62 m. W. of St. John. Manufs, carriages and pumps, and has a lumber export trade. Pop. about 2000.

trade. Pop. about 2000.

Millvale, a bor. of Allegheny co.
Pennsylvania, U.S.A., on the Allegheny R., opposite Pittsburg. Haslumber mills and manufs. boxes, saws, etc. Pop. (1910) 7861.

Millville, a city of Cumberland eo.
New Jersey, U.S.A., 35 m. S. of Philadelphia (Penn.). It manufs.
cottons, glass ware, iron goods, etc.
Pop. (1910) 12,451.

Milman, Henry Hart (1791-1868), a divine and author, was a son of the physiolan, Sir Francis M., Bart. He

physiolan, Sir Francis M., Bart. was educated at Eton and Oxford. Ho took holy orders, and was in 1818 presented to the living of St. Mary's. Reading. He was professor of poetry at Oxford from 1821 for ten years, and in 1827 was appointed Bampton lecturer. Rector of St. Margaret's. Westminster, and canon of Westminster from 1836, in 1849 he became minster from 1835, in 1849 he became

is Dean of St. Paul's. Among his earlier if writings were: Fazio (1815), a play writings were: Fazio (1815), a play sproduced in 1818 with great success; an epic poem, Samor, the Lord of the Bright City (1818), and a dramatic poem, The Fall of Jerusalem (1820). In 1838 he edited Gibbon, and in the tollowing year published a biography of the historian. The works upon which his fame rests are his History of the historian. The works upon which his fame rests are his History ander the Empire (1840), and Tistory of Latin Christianity down to the death of Pope Nicholas V. plants. Common species are Julus guidotus, J. terrestris (sometimes Arthur Milman (1900).

Silved William (1900).

Latin Christianity down to the death of Pope Nicholas V. plants. Common species are Julus guidotus, J. terrestris (sometimes Arthur Milman (1900).

Milne, Sir David (1763-1845), a

Milne, Sir David (1763-1845), a British admiral, born in Edinburgh and died at sea. He entered the navy in 1779, and distinguished himself on many occasions, notably at the capture of the French frigates, La Pique in 1795, and La Vengeance, 1809. In 1816 ho was appointed commanderin-chief on the N. American station, and took part in the expedition against Algiers, being rewarded with a K.C.B. for his services. In 1820 he was elected M.P. for Berwick. He Millsprings, a port hamlet of Wayne | became an admiral in 1841.

Milne, John, F.R.S. (1850-1913), an | return home in 1901. But the resent-English seismologist and mining engineer, educated in Rochdale, Liverpool, and London. He was employed as geologist in Dr. Beke's expedition to N.W. Arabia (1874). He then served the Ja

twenty years, survey of Jap travelled wid Borneo, the U.S.A., and els

Association he established a scismic survey of the world. His works include Earthquakes, 1883; Seismology, 1888; and The Miner's Handbook,

1894. Milne-Edwards, Henri (1800-85), a French naturalist, son of an Englishman. He succeeded Cuvier as member of the Académie des Sciences (1838), was professor of entomology at the Jardin des Plantes (Muséum d'Histoire Naturelle, 1841), and professor of zoology and physiology (c. 1861). He edited the Annales des sciences naturelles (1834-84), and contributed largely to it and to the Dictionnaire Classique d'Histoire Naturelle. works include: Eléments de Zoologie, 1834, 1851; Histoire Naturelle des Coralliaires, 1857-60. His monumental Lecons sur la Physiologie et l'Anatomie Comparée de l'Homme et des Animaux (1857-81) was compiled with his son Alphonse (1835-1900). He also published manuals of materia medica and surgical anatomy.

Milner, Alfred, Viscount (b. 1854), a British colonial administrator, was educated at Tübingen University, King's College, London, and Balliol College, Oxford, where in 1877 he graduated as a first-class honours man in classics. For four years (1881-85) he devoted himself to journalism, writing chiefly for the Pall Mall Gazette under John Morley. He owed his appointment as Under-Secretary for Finance in Egypt, where he remained for four years (1889-92), to Mr. Goschen, Chancellor of the Exchequer, whom he had already served as private secretary (1887-89). His statesmanship was first put to a serious test when, after fulfilling admirably the functions of chairman to the Board of Inland Revenue (1892-97), he was created governor of Cape Colony and high commissioner for S. There is no doubt that his to securo determination for British subjects of the Transvaal that political freedom which the Dutch alone enjoyed helped to precipitate the war, which broke out between the English and the Boers in 1899, and this, combined with the unlooked-for disasters which troops, accounts for the organised opposition with which he met on his Pop. (1911) 8584.

ment that his administration had raised, so far from securing his dismissal from S. Africa, was promptly met by his appointment as governor of the Transvaal and Orange River colonies. This post he retained till 1905. In 1903 he sanctioned the importation of Chinese labour to work the mines—a sanction which subsequently involved him in a storm of He was strongly adverse eriticism. opposed to the granting of self-government to the new colonies. On his return to England he took a leading part in the rejection of the 1909 Budget. In his England in Egypt (1892) he gives a clear account of the results of the British occupation. The Nation and the Empire is the title of

a more recent work (1913). Milner, Isaao (1751-1820), an Eng-lish divine and mathematician, born near Leeds. He studied at Queens' College, Cambridge, where he subsequently became master (1788) and was elected vice-chancellor on two separate occasions. Amongst his various works are miscellaneous essays and sermons and a continuation of his brother Joseph's Church

History. Milner, John (1752-1826), an English Roman Catholic bishop and anti-He entered the English quarian. college at Douai (1766), and was ordained priest in 1777, becoming ordained priest in 1777, becoming bishop in partibus of Castabaia, Cappadocia, in 1803. M. established the Benedicting nuns at Winghester, and wrote a History . . . of Winchester, 1798-1801 (new edition with Memoir. 1839). Other works were The End of Religious Controversy . . . and various theological and archeological pub-

lications. Milner, Joseph (1744-97), an ovangelical divine and historian, educated at Leeds and Cambridgo. Ho became head master of Hull Grammar School, vicar of North Ferriby (1780), and of Holy Trinity Church, Hull (1797). His History of the Church of Christ (1794-1809) was completed (vol. iv. 14th to 16th centuries) by his brother Isaac (1750-1820), dean of Carlisle, and re-edited with a Life and Complete Works by him (1810).

Richard Milnes. Monckton, HOUGHTON, RICHARD MONCKTON MILNES.

Milngavie (locally pronounced Millgny), a police burgh of Scotland, in N W. of

orks, · aper-

th the unlooked for overtook British land, 14 m. S.E. of Roehdele, with a trade in woollen goods, and collierles.

Milo, a tn. in Maine, U.S.A., on spite against a Parian citizen, Lytho R. Piscataquis, 30 m. N.N.W. sagoras. Was impeached on his reof Bangor. Has quarries of roofing-slate. Pop. (1910) 6088.

Milo, or Melos, an island in the fine to be paid by his son Kimon.

Excan Sea, belonging to Greece, one of the Cyclades group. It is about 14 m. long and 8 m.-broad, and covers ponset R., 7 m. S. of Boston. The an area of 64 sam. It is of yolcanie. an area of 64 sq. m. It is of volcanie formation, and has several mountain peaks over 1000 ft. high, Mt. Prophet Elias rising to 2548 ft. The island was first colonised by the Phænicians, and was taken by the Athenians in 416 n.c. In 1537 it was seized by the Turks. The famous statue, the Venus de Milo, uow in the Louvre, Paris, was discovered here by a peasant in 1820. M. is rich in sulphur, gypsum, manganese ore, salt, lead, and zine. The cap. is Plaka, also called Kastro; many historie remains have eently been found in the vicinity. Pop. 5400.

Milo, or Milon, a Greek athlete who flourished in the latter part of the 6th eentury B.C., born at Crotona, Mugna Greeia, Italy. He was famous for his prodigious strength, and became a pupil of Pythagoras. At the Olympic aud Pythian games he was twelve times victor at wrestling. He defeated the Sybarites in 511 B.C.

tribune, camo into offico in 57 B.C. He was a partisan of Pompey, and aided Cicero's recall from exile, thus alded Cicero's recan from earc, thus incurring the hostility of Clodius, whom he killed in a fray (53 B.C.). The uext year he was tried for homicide, and was condemned and exiled to Marseilles. See Cicero, Oratio pro Milone (Reid's ed.), 1906.

Milrei, or Milrea, a Portuguese silver coin, valued at 1000 reis, and since 1835 the unit of the money system in Portugal. It is equal to \$1'075 American, or 53'28d. sterling. In Brazil it is worth about 1s. 3d.

Milt, sec PISCICULTURE.

Miltiades (c. 540 - c. 488 B.c.), a famous Athenian general and victor of Marathou; son of Kimon, and nephew of M. the Œkist. After the Scythian expedition of Darius M. had to leave as a result, according to Grote, of incurring the hostility of Darius, but was at the Chereonesus continuously from the outbreak of the Ionic revolt until about three years Was before the battle of Marathon. one of the four out of the ten Athenian generals who strongly advised the Polemarch, Kallimachus, to give im-mediate battle to the Persians, instead of resisting behind the walls of Eretria; and erowned his eareer by winning the battle of Marathon. Later

United States Meteorological Bureau has an observatory and station on the Blue Hills near by. Fine granite is quarried, and there are manufactures of scaling-wax, paper, eement, and tallow. Pop. (1910) 7925. 2. A bor. of Northumberland eo., Pennsylvania, U.S.A., on the Susquehanna R. (W. branch), 52 m. N. of Harris-burg. Cars, machinery, nuts, nalls, and washers are manufactured, and there are steel and iron works and furnaces. Pop. (1910) 7460. Milton, John (1608-74), a poet, was

the son of a distinguished musician of the same name. He was educated at St. Paul's School and Christ's Col-

lege, Cambridg tion he began

age of ten, and he wrote verses on current events, and, inter alia, the somet on Shake-speare. It was at one time intended that he should study law, but he infeated the Sybarites in 511 B.c. | clined to letters, and was allowed to Milo, Titus Annius, a famous Roman follow his bent. From 1632 he lived

Arcades and Comus. The exquisite Lycidas was written in 1637, ou the death of Edward King. In the following year he went abroad, and spent about a year in Italy, Switzerland, and at Paris. On his return he settled in London, took two nephews as his pupils, and entered into an acrimonious theological controversy with Bishop Hall, his principal writings being The Reason of Church Govern-ment urged against Prelacy (1642) and an Apology (1642). In the following year he married a girl of seventeen. Mary, eldest daughter of Richard Powell, who, finding life dull with the eminent but dour Puritan, went within a month of the nuptials on a visit to her father, and refused to return. Thereupon M. wrote a pamphlet on The Doctrine and Discipline of Diroce (1643), and followed this with The Judgment of Martin Bucer concerning Divorce. He was attacked by the Stationers' Company for publishing pamphlets without licence, and in roots and in reply wrote Areopaylica (1644), a spirited vindication of the liberty of the press, which brought him into great prominence, and gave bin a position as a man of letters that he was entrusted with the expedition had not hitherto been assigned to against Paros, but apparently used him. In 1646 his wife returned to him, the occasion merely to vent a private and within six years bore him four



JOHN MILTON

return of Charles II. published The Ready and Easy Way to establish a Free Commonwealth. M. was now in considerable danger, for the Royalists were very naturally incensed against him. The House of Commons ordered that his Defensio should be burnt by the common hangman, and that he should be arrested. He had gone into hiding, but was taken prisoner. The toriums, a city-hall library, and act of Indemnity, however, put an end to bis troubles. M. had married a second time in 1658, but this wife second time in that is still extant settled down to eor

children, dying in giving birth to the according to Aubrey, was finished five last. He sided with the army against years later, though it was not published sing, and after the execution of Charles I. published the Tenure of the work, and his widow subsectings and Magistrates, in which he quently received another \$8. Thirteen last. He sided with the army against the king, and after the execution of Charles I. published the Tenure of Kings ond Mogistrates, in which he espoused the popular side. In 1649 he became Latin secretary to the Council of State, and in his official capacity answered Gauden's Etkon Rasilike with Eikonoklastes. He beretained his post until the Restoration, during which period he wrote
several pamphlets, and just hefore the
his past time. He broadses

to-day. When M. Showed Thomas
Losdy. Thou hast said much here of
Paradise Lost,' Ellwood remarked,
but what hast thou to say of Paration, during which period he wrote
several pamphlets, and just hefore the
losdy. Eliwood the manuscript of Poradise Lost, 'Thou hast said much here of Paradise Lost,' Eliwood remarked, 'but what hast thou to say of Paraplan, but in 1671 he published Paro-dise Regained. In the same year appeared his last important work, Samson Agonisles. He died on Nov. 8, 1674, and was buried in St. Glles, Cripplegato. M. stands high above all English poets, and is second only to Shakespeare himself. His splendid vocabulary, his swinging rhyme, and majestic diction are unrivalled. He demands reverence rather than love, for he is, above all things, austero. Love touched him not, and of humour he had not a spark. Yet, in spite of these defects, Paradise Lost is a these defects, Paradise Lost is a triumph of the poetic art, that all must admire and none can contemplate without awe. There are several biographies, but the classic work is Masson's Life of the resident work is in connection .

siostical, and Time (6 vo Time (6 vols.), 1809-80. Masson also edited M.'s Works (2nd ed.),

1890. Miltonia, a genus of epiphytal orchids, with large, flat, brilliantly coloured flowers resembling pansies in shape.

Milton Regis, a tn. of N. Kent, England, 9 m. E. of Chatham. Pop. (1911) 7478.

Milwaukee, chief city and port of Milwaukee co., Wisconsin, U.S.A., on the W. sbore of Lake Michigan. It has a fine harbour, and earries on a large export trade in barley, wheat, and oats. The chief industries are tanning and brewing, and there are immense flour-mills and manufac-tories of clothing machinery, agri-cultural implements, fron-castings, etc. The city has numerous fine public parks, a free hospital and suoa-

namsa (Sanskrit, investiga-two divisions of the orthodox philosophy, comprising a series work that had long been in his mind, of commentaries on the Vedas, the Paradise Lost was begun in 1658, and, sacred books of India. The first division is the Purva-mimamsa ('Prior Inquiry'), called also the Harma-mimamsa ('Investigation concerning Works'). The second is the Ultara-mimamsa ('Latter Inquiry') is to the Supreme of Brahma-mimamsa ('Latter Inquiry') is to the Supreme of the M.

Bolssonade. See Christian marx, Dissertatio de Mimnermo, 1831.

Mimosa, a large genus of leguminous plants with feather-shaped cleaves which in some species are sentenced by the second of the M.

M. sensitiva, both natives or includes of the M.

series of sutras, or aphorisms, which the other purple flowers, are themselves so obscure as to need | Mimulus, or Monkey Flower, a elaborate commentaries. The sage Jaimini is supposed to have been the founder of this kind of knowledge. The subject-matter is the ritual given in the Vedas, on which it supplies a commentary. See Garbe's Philosophy of Ancient India, 1897.

Mime, see MIMUS.

Mimicry, an evolutionary process by selection, which occurs both in animals and plants, giving them in the simplest way the equivalent of some advantage possessed by the object imitated, Sometimes the mimic assumes the appearance of a harmless creature so as to come within easy reach of its unsuspecting prey; a good instance of this is the caracara, or curassowhawk, of Central America, which very closely resembles the gallinaceous curassow, and the hawk's victim, confusing them, allows it to approach within striking distance. More commonly M. is protective, and instances of this occur in many branches of the animal kingdom, such as the stick caterplliars, which assume a marvellously twig-like appearance on the shrub or trees where they feed; or stingless insects, which bear a sufficiently closo resemblance to wasps and bees to be avoided by birds and other insectivorous enemies. A wonderful example of M. is the angler fish, which dangles small fleshy lumps at the end of long filaments over its largo mouth. The small fish that nibble at the 'balt' fall an easy prey. M. occurs most frequently in plants where the object is to attract insect fertilisers. Mimir, a water-giant of Norso

mythology, to whom belonged the fountain of wisdom beneath the world-ash Yggdrasil. This fountain beneath the was regarded as the source of memory and wisdom, and known as M.'s Well. Odin, in exchange for a drink therefrom, gave M. one of his eyes. On the death of the giant, Odin caused bis head to be embalmed and consulted

as an oraclo.

Mimnermus of Colophon, a Greek poet and contemporary of Solon, flourished in the latter balf of the 7th century B.C. He is said to bave invented the pentameter verse, to have brought the elegy back to its original design of expressing personal grief. Fragments of bis poems have been collected by Estienne, Brunek and

Is the Purva-mimamsa | Boissonade. See Christian Marx.

genus of fragrant annuals and perennials of the order Scrophulariace.

M. moschalus is the common musk. M. cardinalis, cardinal flower, is a popular garden plant bearing blooms which vary from scarlet to pale yellow. M. cupreus is orange and crimson. M. glutinosus is a valuable shrub which bears orange or scarlet flowers almost all the year round.

Mina (Heb. manch, weight, from manah, to divide): 1. A Greek weight, containing 100 drachme, or close upon 16 oz. 2. A sum of money equal to the sixtieth part of a talent. The coin was never minted, but only omployed for purposes of account. The value of the Attic M. was £4 1s. 3d., that of the Æginetan M. £5 14s. 7d.

Minab, or Minau, a tn. of Persia, in the prov. of Kerman, 52 m. S.E. of Bender Abbas, in an easis noted for dates. Pop. 10,000.

Mina Bird, see MYNA.
Minaret, the English form of the
Arabic manaret from manar, lighthouse. It is the name of the storeyed which embellishes Mohamturret, mosques from medan andthe balcony of which the muczzins chant the 'azan,' to summon believers to praver.

Minas, a tn. of Urnguay, in a dept. of the same name, 63 m. N.E. by E. of Montevideo. Pop. 7000.

Minas de Riotinto, a tn. of S.W. Spain in the prov. of Huelva. It has productive copper mines. 12,000.

Minas Geraes (general mines), a state of Brazil, N. of Rio de Janeiro, with an area of 222,160 sq. m. The surface is for the most part mountainous, with well-watered plateaux. The climate is extreme, and for the most part unhealthy. Cereals are extensively cultivated, and there is great modern agricultural develop-As regards mineral wealth, mont. M. G. ranks among the first of the Brazilian states. Gold, silver, copper, platinum, diamonds, rubies, and other precious stones are found, and extensivo iron works have been erected. Wool-weaving and the making of cigarettes are important industries, cotton, millet, rice, maizc, etc., are freely grown. Present cap., Minas. Pop. 4,277,000. and tobacco, coffee, sugar cane.

Minbu.a tn. of Upper Burma, India,

and the cap. of the dist. of Minbu, chemicals and glassware. In 1759 on the r. b. of the Irawadi. Rice, a victory was gained here by the grain, millet, beans, peas, and Duke of Brunswick over the French.

233,377; of tn. 6000.
Mince Pies, a sweet very popular in England at Christmas, which made of a compound consisting of raisins, apples, lemons, eurrants, figs, almonds, einnamon, ginger, nnt-meg, and suet, and often many other ingredients, chopped fine, mixed to-gether, and baked in pastry.

Minch, or Minsh (stormy sea), an arm of the Atlantic Ocean, which separates the N.W. mainland of Scotland from the Island of Lewis, belonging to the Hebrides. It is from 20 to 46 m. in width, and about 60 m. from N.N.E. to S.S.W., and has a rapid current. A portion of it, called the Little Minch, is a passage separating the Island of Skye in the Inner Hebrides, from the middle part of the Outer Hebrides—S. Harris, N. Uist, and Benbecula. This is from 14 m, to 20 m, in width,

Minchinhampton, a tn. of Gloucestershiro, England, 4 m. S.E. of Stroud. There are breweries, and woollen eloth is the chief manuf. Pop. (1911)

3702.

Mincio (ancient Mincius), a riv. of Italy, which rises in Lake Garda. It flows S. and S.E. through Mantua, and enters the R. Po, about 10 m. S.E. of Mantua. Length 120 m.

Mind, see Psychology.

Mindanao, the largest and most southerly of the Phillippine Is., eovering an area of 36,292 sq. m. Three or four ridges eross the island, with intermediate depressions and many rivers and lakes. It has the volcanocs of Apo(10,312 ft.), Macaturing and Sanguil in the N., and in the S.W. stretches a long, narrow peninsula continuing in the Basilian Is. and Sulu group. The principal bays are Butnan, on the N., Davos on the S.E., Savangani, Sibuley, and Illana on the S. The chief rivers are the ng iu

Bay, m its ie in-

terior of the island is wild and covered for the most part, with unexplored forests. M. was the first of the Philippines where Magellau lauded in 1521. The raising of cattle and horses is the chief industry. Pop. 499,634 (about 400,000 uncivilised). See Philippine Islands.

Mindérerus Spirit, known in the Pharmacopæia as Liquor ammonii acetatis, the dose being 2 to 6 fiuid drachms, is a solution of ammonium

acetate, prepared by neutralising ammonium acetate with acetic acid. It is used as a diaphoretic in febrile

diseases, as an eyewash, and also on hot flannels in the ease of mumps. Mindoro, one of the Philippine Islands, lying S. of Luzon, 110 m. long. 56 m. broad, and covering an area of about 4050 sq. m. The highest point of the island is Mt. Halcon (8868 ft.). Calapan, in the N.E., is the capital. Rice, cocoa, tobacco, hemp, cotton, etc., are raised, and various kinds of timber are carried of the control of the c timber are exported. Coal and sulphur are being worked. about 30,000.

Mindszent, a com. of Hungary in the prov. of Csongrad, on the R. Theiss, 17 m. N.E. of Szegedin. Pop. 12,000.

Minehead, a market town and watering-place of Somerset, England, 21 m. N.W. of Dunster. Pop. (1911) 3459.

Mineo (ancient Menæ), a th. of Sieily in the prov. of Catania, 27 m. S.W. by W. therefrom. Pop. 10,000. Mineral Kingdom, one of the three

great departments into which nature has been divided, viz. animal, vegetable, and mineral. Members of the animal and vegetable kingdoms are characterised by the development of special organs or structures adapted for 'life' or 'growth.' The M. K. however, is concerned only with minerals which may be described as homogeneous substances, natural formed under conditions in which neither animal nor vegetable life has taken part. Minerals increase by a process of accretion, not by assimilation, as in the organic kingdoms, and arc also bounded, in their most developed form, by plane surface, i.e. are crystallised.

Treatises on M. by Mineralogy. Treatises on M. D. Theophrastus, Dioscorides, and Pliny, although now of little scientific value, show that the study is of great antiquity. Agricola in the 16th century, in his work, typifics the advance made in descriptive M.; Wallerius in 1747 Issued the first systematic descriptive work, and Romé de Lisle in his Crystallographie (1772) first applied to the science the varieties. applied to the science the principles Minden, a tn. of Prussia in the prov. of Westphalla, on the l. b. of the Secence and proven by rail. There is a fine Catholic cathedral, dating from the Lith and 13th centuries. The selence is of concerned with the chemical and physical manufs, are linen and woollen goods, of crystallography. Later mineralogists, Werner, Hauy, Von Kobell, and

brace crystallography), and on the class of silicates belong the majority geological side discusses their modes of occurrence, whether original or groups, such secondary, and their modes of origin,

or organic. mical comils, simple

qualitative and more or less quantitative analyses can be performed by means of the blownipe in the dry way. Complete analysis in the wet way is necessary to determine a formula for the mineral. The physical characteristics examined are colour, lustre, specific cravity, hardness, malleability, fusibility, electrical and magnetic proporties, etc. From a knowledge of these oharacteristics it is possible to distinguish certain minerals, e.g. gold by its colour and specific gravity. It is by means of their crystalline symmetry and crystalline constants that the species of minerals are determined. The study of the form of the crystals constitutes morphological or geometrical crystallegraphy, the three principles which characterise the crystalline form being indicated by the terms 'constancy of angles,' 'symmetry,' and

cleavage and fracture. Dependent, too, upon the erystalline form are the optical properties of the mineral, and by these optical tests, viz. opacity, cleavage, refractive indices, pleochroism, birefringonce, etc., the minerals present in the most close-grained rocks can be determined upon examination of thin sections for the microscople. Minerals may be classified as metallic and metallic, but generally are classified into groups, the members of which show a certain unity chemically, physically, and crystallographically, e.g. the gold group, the members of which are all isetropic, and the arsenic group, of which the members occur in rhombobcdrons. Minerals of analogous constitution often have the same crystalline form. This isomerphism is well shown by the carbenate, calcite, magnesite, dolomite, siderite, calamine, etc., which are similar in form, occurring in rhombohedral crystals, and show the

the earbonate of calcium occurs in the hexagonal system as calcite and in the rhombic system as aragonite. The silicates, which form the largest class of all minerals, exhibit fully theso phenomena of isomorphism, dimorphism, and polymorphism. To the

ls, which are groups, such roxcnes, felspars, mlcas, zeolites, etc., according to their similarity of chemical composition and crystalline properties. In their modes of occurrence

their modes of occurrence. minerals are essential or accessory according as its absence would either alter the rock and make it fundamentally different or would not affect its petrographical species. quartz is an essential constituent of granito, its removal altering the petrographic species to syenite. essential minerals are original, but the converse is not true. Thus topaz and sphene may be original con-stituents of granite, but are yet accessory minerals in that their absence does not alter the real feature. absence does not alter the rock fundamentally. Accessory minerals frequently occur in oavities where they had room to crystallise out from the general mass, as, for example, the crystals which line the drusy' cavities in granite. Secondary minerals, the result of subsequent changes in rocks, are generally due to the chemical action of percolating waters, either from above (as in the formation of kaolin) or from below (as in the formation of gneisen and tourmaline). Groups of minerals are found associated, indicating a significant paragenesis. It is observable that basic minerals tend to separate out together from rock magmas by the process of magmatle differentia-tion. In saline deposits, calcite, gypsum, rock salt, carnallite, etc., are frequently found associated. The decomposition of minerals by the action of percolating waters frequently gives rise to pseudomorphs, i.e. the external form of a mineral is retained minerals become

become change of silica for calcite, thus giving pseudomorphs of silica after calcite. As well as occurring in the crystalline form, minerals assume a concretionary form, some being particularly prone to assume this form. Siderite is generally nodular, while calcite is often found in concretionary form. Silica often assumes this shape, as in the botryoidal form of chalcedony. Several hundred species of minerals have been described, and the number is constantly increasing by the addition of new ones. See CRYSTALLOGRAPHY, ISOMORPHISM, and PETROLOGY. For the change of the

F. Rutley's
A. Mier's
Bauerman's
\$4; Dana's

System of Mineralogy, 1892. For waters the sulphuretted hydrogen practical determinative M., see the and sulphurous acid are sometimes work of Brush and Penfield, 1896 oxidised into sulphuric acid which (new ed., 1912). "ee in the water. Waters aspects of the scie

busch-Iddings' Rock-

1888: Hatch's Petrology, Harker's Petrology for Students, 1908, and his Natural History of Igneous Rocks, 1909.

Mineral Oil, see PETROLEUM. Mineral Rights, Taxation of, see

LAND TAXES

Mineral Waters, so called owing to the presence in thom of mineral constituents, derived from the rocks over which they flow. The waters are sometimes cold, or may he warm or even holling. As a general rule the thermal waters are more mineral than cold waters, although there is no relation hetween the temperature and the chemical composition. M. W. may be classified according to the prevailing mineral substance contained in them. Earthy M. W. generally contained in them. ally contain carhonate or sulphate of calcium, and occur abundantly in limestone districts. Such are the hot springs of Bath. The waters of Baden and Contrexéville are also of this type, the waters generally heing imbibed. Feruginous or chalybeate waters contain a large proportion of ferrous sulphate, and are known by their 'inky' taste. Brine springs contain sodium chloride or salt. brines worked as sources of salt are derived from borings into saliferous derived from borings into saliterous beds, such are the springs of Cheshire, Salzkammergut (Austria), and Bex (Switzerland). These springs also contain ohlorides of potassium, magnesium, and calcium, sulphates of calcium and other metals, silica, phosphates, nitrates, and gases, such as carriery dioxide sulphyretted. carbon dioxide, sulphuretted tc. The hot springs of hydrogen, etc. volcanic districts usually contain mineral matter, dissolved chiefly with sulphates, carhonates, des. etc. The oil springs of silica. chlorides, etc. America are typical mineral springs. Medicinal springs are M. W. which are believed to have a curative effect on diseases. These medicinal waters he: (1) Alkaline, containing lime or soda and carbonio acid, as at Vichy and Saratoga; (2) hitter waters with sulphates of magnesia and soda, as at Sodlitz and Kissingen; (3) salt, as at Wiesbaden, Cheltenham, Droitwich, and Homburg; (4) earthy, as at Bath and Lucca; (5) sulphurons, containing sulphur in the form of sulphideand sulphuretted by dress of the sulphideand sulp sulphides and sulphuretted hydrogen, as at Aix-la-Chapello, Harrogate, and Aix-les-Bains. The water of these springs may he warm and acquire their medleinal reputation from their thermal qualities.

raters, e.g. Apollinaris. 1892; has heen averred that the medicinal 1908, qualities of some of these cure gneous waters' are due to the presence of radium in small quantities. Gouty and rheumatic ailments are most likely to henefit hy M. W. Dyspepsia kindred stomachio troubles henefit by the diet and general health regime, as well as by the waters. Skin diseases are hest cured with sulphurous waters; anæmia improves with iron waters and purgatives, while hydrotherapeutic treatment henefits the ohese and diabetics.

Mineralwells, a tn. and health resort of Texas, U.S.A., in the co. of Palopinto, 78 m. W. of Dallas. Natural gas and coal are found. Pop.

(1910) 3950. Minerbio, a tn. of Italy in the prov. of, and 11 m. N.E. of, Bologna. Pop. 7400.

Minervaile, a coal-mining bor. of Pennsylvania, U.S.A., in Schuylkill Co., on the Schuylkill R., 4 m. W. of Pottsville. Pop. (1910) 7240.
Minerva, a Roman goddess, identified with the Greek Athena. Her worship was celebrated with that of Luniter and June in the temple on the first control of the control o Jupiter and Juno in the temple on the Capitol. Her festival, called quin-quatrus, fell on March 19 and lasted five days. Sho was the goddess of wisdom and good counsel. A carred image of her, called the 'Palladium,' and supposed to have been carried from Troy hy Æneas, was preserved in the temple of Vesta. See Warde Fowler's Roman Festivals, 1908.

Minorvino Murge (ancient Lucus Minerwe), a walled tn. of Apulla, Southern Italy, in the prov. of Bar, and 41 m. W. of the town of that

name. Pop. (com.) 18,000.
Mines: Military.—Avery important branch of sappers' work in military. engineering. Before the introduction of gunpowder when masonry defied all means of attack, tunnelling and undermining was resorted to. Against these the hesieged 'countermined' hy means of an onvelope gallery in advance of and parallel to the wall. The first instance of the use of ex-plosive mines occurred in 1503 when Pedro Navarro reduced Castello del' Uovo near Naples. Since then the art of mining and countermining has developed enormously; shafts and galleries form an intricate network, chiefly in defence. The object of the defonders is to destroy mines and miners at a distance from the object ation from their of attack: the approach of sappers is In sulphurous audible at about 60 ft., and explosive

charges can be fired to destroy these. The attack may, howover, hy exploding a carcfully arranged and large charge, destroy the defensive galieries over a considerable area, at the same time hreaking up the surface into 'craters.' These may he immediately occupied by troops and the advance continued. Balance of advantage lies with defenders who can prepare beforehand, and at leisure, galleries lined with masonry. Another form of military mining consists in sowing the ground over which the cnemy must advance with charges of dynamite, cordite, etc., buried a few feet helow the surface. These are exploded by means of electric cahle, Naval (see SUBMARINE MINES).

Minghetti, Marco (1818-86), an Italian statesman and economist, born at Bologna. He entered the service of Pope Pius IX. after his election (1840), and was appointed member of the Consulta della Finanze. When Pius yielded to the demands of Ans-tria, he resigned office and fought in tria, he resigned office and rought in the Sardinian army in Lombardy. In 1859 Cayour appointed him Secretary-General to the Foreign Office, and subsequently Minister of the Interior After Cavour's death (1861) (1861).succeeded to the premiership hе (1863), and concluded with Napoleon III. tho September Convention (1864). He was later Minister of Agriculturo (1868), and Premier (1873-76). His writings includo: Della Economia Publica, 1859; La Chiesa e lo Slato, 1878, and Mici Ricordi, 1885.

Mingrella (the ancient Colchis), has formed part of the Russian government of Kutais sinco 1867, but it was once a principality of Caucasus, Georgia. The Mingrelians belong to the same stock as the Georgians and

numher 241,000.

Minho: 1. A river, 170 m. long, rising in Galicia, Spain, and flowing S. and S.W. to the Atlantic, forming latterly a northern boundary of Portugal. 2. A prov. of Portugal, see

ENTRE MINHO E DOURO.

Miniature-painting, usually applied to portraits painted on a very small scalc. M. is generally executed on ivory and is, as to composition, drawing, and finishing, subject to the same process as any other kind of painting, but the colouring, at all events of the face, is dotted or stippled on. The term 'miniature' (from Lat. mino, to colour with red ochre) was originally applied, not to a small portrait, hut to the highly specialised art of illustrating MSS. Each of the 250 miniatures in illustration of the celebrated Cottonian Genesis was about 4 in. square. Later the 'miniature' 4 in. square. Later the 'miniature' duration (nota minima). A M. rest became merely a large initial letter indicates silence for the duration of containing on or around it a pictorial a M.

representation on a small scale of some incident or person spoken of in the From this fact it is possible that the term miniature when it bocame exclusively applied to small portrait-painting on enamel, ivory, or any other material had become erroneously associated with Latin mino, to diminish. Ivory is commonly sclected for M., because the peculiar hne of the hetter kinds presents great facilities for the imitation of human skin, and indeed ivory may be re-garded as the chief elementary tint that goes to the formation of the colouring of flesh. Before heing used theirory has to he prepared by rubbing

on it pumice powder and water with a glass 'muller,' which gives it a 'ground' surface. The conversion of photographs into 'colour photographs' is, however, hardly the art of a Hans Holbein, for it hardly consists in doing more than add nature's colouring to what must perforce be regarded as nature's form; and most exports agree that to attempt to improve the photography deepening shadows, or vice versa, usually detracts from the accuracy of the portraiture. English artists have been conspicuous in the past as miniature painters, among the most notable heing: Isaac Oliver, whose miniatures are to he seen in practically every important portrait collection: he painted James I. and most of the contemporary court and noblity: Poter Oliver, his son, whose celebrated minlature, 'Tho Entombment of Christ, was hegun hy his father and finished hy the son; Richard Cosway (1740-1821), whose miniatures snuff-hox lids were famous; and Sir William Ross (1794-1860), the king of English miniaturists. See Redof English miniaturists. grave's Dict. of Artists of the English

School.
Minie, Claude Etienne (1814-79), an inventor of the Minie rifle, horn in Paris. He entered the army as private and rose to the rank of colonel (1858). having scen active service in Africa. The rifle hearing his name was in-

vented in 1849.

Minieh, a prov. of Upper Egypt, with an area of 772 sq. m., drained by the Nile. Minich is the cap., situated on the Nile midway between Siut and Beni-Suef. It has manufs, of earthen-waro, and a government cotton factory. Pop. of prov. 625,000, of tn. 27,000.

Minim, a character or note in music. equal in duration to one-fourth of a breve, or two crotchets. Its name is derived from the fact that in ancient music this note was of the shortest

Minims, or Minimi, friars of the religious order founded by St. Francis of Paula. The rule is founded on that of St. Francis of Assisi. St. Francis of Paula founded his first convent in 1444, and the first rule was made in 1493. There are also second and third orders.

Mining includes all processes whereby minerals are obtained from their native surroundings beneath the earth, and all processes which are necessary before they can be taken over by the metallurgist. It is quite an ancient art, and is mentioned in Job xxviii., and a gold mine is depicted on an Egyptian papyrus drawn in 1400 B.C. In 1556 the first systematic book on mining appeared, written by Georgius Agricola. It was not until after the introduction of gun-powder in 1620, however, that the art could make great strides. That side of mining which is concerned with the raising of minerals from bias or strata, is treated under COAL-MINING. We have, therefore, only to deal here with the mining of that class of mineral which gathers in veins or In these cases the metal bas filled a former fissure in the carth's surface. With these second class of deposits, the vein has to be carefully searched, and inclined shafts are found to be better than vertical It is usual, however, with an extensive mine to sink a vertical shaft, and to run out cross-cuts, or passages at various levels. None of the ventilating difficultles are met with in this second class that are met with in this second class that are met with in the case of coal, while the methods of boring and sinking (where these are resorted to), timbering and handing are similar although not so elaborate. See COAL-MINING, and the articles on the various metals and minerals. See also Callon, Lectures on Mining these ball November 2018. Mining (trans. by Le Nevo Foster and Galloway); B. H. Brough, Mine Surand Transactions of veying, Mining Institutes.
Ministers, see Cabinet.

Mink, a name given to some species of the weasel family. The American M., Pulorius vison, is larger than a stoat, and the fur varies from yellow to dark brown in colour. It is aquatic in habit, feeding on fish and small mammals. When attacked it promammals. When attacked a produces a very offensive secretion. The European M., or Marsh Otter (P. lutrola), closely resembles the other species, its white upper lip being its chief distinction. If taken young, Ms. are easily tamed, and have been used as ferrets.

Minmi, a tu. of New South Wales, Australia, in Northumberland co., 7 m. W.N.W. of Newcastle. There are coal mines near. Pop. 6000.

Minneapelis, the largest city of Minnesota, U.S.A., and co. scat of Hennepin co., is situated on both banks of the Mississippi, at the Falls of St. Anthony, and covering an area of 53 sq. m. It is the great centre of the wheat and flour trade, its immense water-power being used in flour-milling. There are extensive manufactories of machinery, carriages, furniture, boots, shoes, etc. is the seat of Minnesota University. and owing to its picturesque neighbourhood is a favourlte holiday resort.

The Falls of Minnehaha, immortalised by Longfellow in his *Hiawatha*, are near the city. Pop. (1910) 301,408. Minnesingers (Ger. *Minnesangers*, love-singers), German lyric poets who flourished about 1150 to 1300. Their lays dealt not only with love, but also lays dealt not only with love, but also with other topics, such as country life, military adventure, and politics. The earliest M. were chiefly Austrian and Bavarian, and were ofton called the Swabian poets, because in their songs the Swabian dialect was prevalent. Their art spread rapidly throughout Germany, and in 1207 the famous 'Sangerkrieg,' or 'Battle of the Bards' (celebrated in Tannhauser), was held at the Warthurg in Thuringia, where at the Warthurg in Thuringia, where the Landgrave, Hermann I., held open court for all minstrel folk. Among the most famous M. were Among the most inmous in which were friedrich von Hausen, Heinrich von Ofterdingen, Otto von Botenlaube, Heinrich von Morungen (the noble Morringer of the ballad), and above all Walter von der Vogelweide, whose songs were not only skilfully wrought but also imbued with strong national and political feeling. Ms. wero generally of noble, sometimes princely rank, but some were mere wandering minstrels. Rudiger von Manesse, burgomaster of Zürich (d. 1304), col-lected nearly 1500 Minnelleder. Tho best modern selection is Von Hagen's

4 vols. (Leipzig, 1838).

Minneseta: 1. A N. central state of the U.S.A., bounded on the N. by Canada, on the S. by Iowa, on the E. by Lake Superior and Wisconsin, and on the W. by N. and S. Daketa. It covers a total area of 84,682 sc. m. Its extremo length is about 400 ni.. and breadth 354 m. The surface in the S.W. portion is an undulating plain, well watered with lakes and streams. In the N. central part is a highland, called the Height of Land, with an elevation of 1300 to 2000 ft. The land slopes in all directions from this central elevation, and In the N.E. corner the Misquah hills reach an corner the Misquah hills reach an altitude of 2230 ft. The great rivers of the state are the Mississippi, dralning about two-thirds thereof: Red R., forming the western, and tho St. Croix, the castern boundary, and

there are numerous minor streams, besides a large number of lakes. Agriculture is the principal industry; wheat, barley, oats, hay, rye, potatoes, etc., being the chief crops. As regards mineral wealth, the iron ore deposits are the richest in the country, which I and the limestones and sandstones within there are numerous minor streams, belonging to Spain. Cercals and fruits besides a large number of lakes. Agri- are produced. There are good pasdeposits are the relies and sandstones and the limestones and sandstones afford material for the manufacture of bricks, tiles, etc. The principal

2,075,708. plored by the French as early as 1660: in 1686 Nicolas Perrot took possesm 1656 Micolas Perrot took possession of it in the name of the king of France. It was ceded to England in 1763, and hecame part of the U.S.A. after the Revolution. It became a state of the Union (1853). 2. A river of U.S.A., rising in a series of lakes in M., and an affluent of the Mississippl. Its total length is 450 m., and it flows S.E. for about 320 m., the rest of its course being N. rest of its course being N.E.

Minnow (Leuciscus phoxinus), a small fish common in most parts of . It is

of lts to brown and green colouring. It varies from 3 to 7 in. In length, and breeds freely, and is much hunted by larger

fish.

Minor, in Scots law, a person under lawful age or majority. In English law the term generally used is infant. As opposed to punil, it means a male over fourteen, or a female over twelve and under twenty-one. Ms. in this restricted sense are capable of consent, but are treated as persons of such inferior discretion and judgment as to require legal protection. Pupillarity, on the other hand, is a state of total incapacity. A M. who has no curator (guardian) may validly enter into a contract to marry, or any other contract, lease his heritable lands, and give his movables to whom he will. But the acts of a M. who has a curator are, generally speaking, In-valid without the latter's consent. Nevertheless, he may, without such consent, do any act which does not affect the property under his curator's control.

Minor, in music, a term referring to intervals and scales which are a semitone less than the corresponding major. The M. scale is derived from the ancient Greek system, its peculi-arity being that it possesses no lead-ing note, or semitone below the tonic. There are in existence four forms of the M. mode. A common chord with a M. third is a M. ohord or triad.

Minorca (Sp. Menorca), the second largest (area 293 sq. m.) of the Balearic Islands in the Mcditerranean an area of 35,220 sq. m., two-thirds of

tures, and horse and cattle rearing are engaged in. In winter the island is exposed to the boisterous winds from the N. The capital is Port Mahon, which has a splendid barbour. Pop.

Minority, see Representation.

Minos, an ancient king of Crete om the legends were so ascribing to him the

t virtues together with History. M. was ex- monstrous cruelty and tyranny, that poets and historians solved the difficulty by supposing two kings of the same name. One, a favourite of the gods, was after death appointed supreme judgo in the realm of the shades; the other, connected with the story of the Minotaur (q.v.), was killed in Sicily, whither he bad gone in pur-suit of Dædalus. Ancient legends, once looked upon as entirely mythical, have been proved by Dr. Schliemann and others (see CRETE) to have their foundation in fact. There were several Minoan dynasties, and possibly M., like Pharaob, was a dynastic

Minot, a city of N. Dakota, U.S.A., in Ward co., 100 m. N.W. of Bismarck. It is a shipping port for coal and grain. Pop. (1910) 6188.

Minot, Lawrence (c. 1300-52), and Prodict post the outbook of slaven

English poet, the author of eleven songs celebrating the triumphs of Edward III. They are written in the Northumbrian dialect, with a sprinkling of Midland forms, and were first published by Joseph Pitson in 1795 under the title Poems on Interesting Events in the Reign of King Edward III. See edition by J. Hall (Clarendon Press, 2nd edit. 1897), and T. Wright's Political Poems and Songs, 1859.

Minotaur, a fabulous monster, half bull and half man, said to have been confined by Minos II. in the laby-rinth at Chossus, and fed upon the flesh of young men and maidens scut as an enforced tribute from Athens. Among the ruins of Cnossus bave been found wall-paintings of bull fights and figures of a monster as described

above. Minotaur, a British armourca cruiser, which was laid down in 1905 and launched at Devouport in 1906. Its displacement is 14,600 tons, and

its speed is 23 knots.

Min River, a riv. of China in the prov. of Fukien. It flows in a S.E. direction after leaving Yen-Ping-Fu, and enters the sea about 30 miles below Fuchou-Fu. navigable by small native boats for

which are composed of marshes, soil in a temperature of about 60°, and lakes, and marshy forests of stunted trees. The N. part of the prov. is higher and well timbered; through this district runs the railroad from Warsaw to Moscow, on which M., the cap. (pop. 97,997), has an important station. The marshy districts (called Polyessia) are extremely scented and has ovate leaves; and unhealthy, and have hardly any the very common halry M. Corn the cap. (pop. 97,997), has an important station. The marshy districts (called Polyessia) are extremely unhealthy, and have hardly any cultivation, the inhabitants depending mainly on the timber trade, fishing, and hunting. Manufs. are few and unimportant. The chief rivers are the Perseira and the Perseira tribs

and unimportant. The chier rivers are the Beresina and the Pripet, tribs. of the Dnieper. Pop. 2,813,400.

Minster (Lat. monasterium. Ger. Münster), the church attached to a monastery or forming part of it. The name is now applied in England to certain large onurches or cathedrals, such as those of Westminster

and York.

Minster in Sheppey, a vil. of Kent, England, in the Islc of Sheppey, near the north shore. It is a rising There are oyster scaside resort.

beds. Pop. (1911) 1546.

Minster in Thanet, a vil. of Kent,
England, on the R. Stour, 4 m. W. of Ramsgate. It possesses an ancient parish church, which was attached to a nunnery founded in 670, and also an abbey. Pop. (1911) 2500.

Minstrels, ltinerant musicians and poets akin to the French 'jonglenrs,' flourished during the 10th to the 14th oentury. It is suggested in Grove's Dictionary of Music that the term was derived from the Lat. minister, a servant, since minstrels were a servant, since mustres were employed as such by the troubadours and minnesingers, many of whom were of noble bitth. Their duties consisted chiefly in playing accompaniments for their masters. Gradually the term came to embrace all travelling musicians and bards; they were welcomed by all classes, they were welcomed by all classes, and by the end of the 13th century the chief houses had permanent staffs of minstels. Partly on this account and partly by reason of the spasmodio censure of the Church, the itinerant class sank into discount and partly sank into discounts. repute, and wore classed as ordinary repute, and wore crassed as ordinary beggars and rogues. The art received its final death-blow from the institution of play-houses and the introduction of printing. See Chambers's Mediwal Stage, 1903.

the very common halry M. Corn M. and the marsh-whorled M. have the whorls of flowers separate and occurring in the axils of leafy bracts. The catmints form the genus Nepda. See PENNYROYAL and PEPPERMINT. Mint. The Royal M. has oxclusive

powor to make or issue coined moacy (see Currency, Money), except that the crown, under the Coiaage Act, 1870, is empowered, with the advice of the Privy Council, to direct that (a) foreign coins shall be legal teader. up to specified amounts, and (b) coins other than gold, silver, or brenze up to an amount not exceeding five shillings. This power of the crown as to (a) is only used in practice to legitlmato native curreacy In British possessions. The nominal head of the M. is the Chancellor of the Exchegner, but the notual chief is the deputy-master or master and worker of the M., who is a permaacat worker of the M., who is a pormacca functionary appointed by the First Treasury Lord. Besides all money in circulation in England, all modals (q.v.) awarded by the crown are made at the M., and certain colonies are supplied with silver and bronze coins directly by this department. Gold bullion brought to the M. by any person must be assayed, coined, any person must be assayed, coined, and delivered out to such person without charge therefor, or for waste in coinage; but the department may refuse to assay and coin the bullion if it is of such a quality that it canaot be brought to the standard of finences required by the Coinage Acts without refining some portion of it. (See Halsbury's Laws of England.) If finer than standard, allowance must be made to the person bringing such bullion in. Once a year the trial of the 'pyx' takes place at the M., when a jury of experts, under the presidency of the King's Remembrancer, examines the coinage made during the year.

18..

Chambers's Mediwal Stage, 1903. 18
See also Music and Song.
Mint (Mentha), a large genus of aromatio plants (ordor Labiate). Spearmint (M. viridis) is grown for its shoots and leaves, which are utilised for culinary purposes. It can other be grown in the open garden in a moist rich soil and dried and stored for use, or it can be forced and stored for use, or it can be forced and stored for use, or it can be forced Baron M.; became governor general by placing the roots in boxes of rich

with great ability. Returning home Lyell). There are no large deposits

minster Abbey.

Minucius, Felix Marcus, a very bered only for his Octavius, a dialogue between Cecilius, a pagan, and Octavius, a Christian, with Fellx as arbiter. In the arguments for and against polytheism, Octavius is declared victor.

Minuet (from It. minuetto, through Fr. menuel, small, dainty), a graceful dance for two persons, supposed to have originated in Poltou, France. It was set to music in a time, and was performed slowly, and with much dignity. The name is also applied to the musical composition written to the time and rhythm of the dance, and is frequently introduced by Handel and hand is the state of the dance. Bach into suites. Beethoven de-

veloped it into the scherzo.

Minuscules, small letters developed from ancient uncial and cursive alphabets. Writing being used for business as well as literary purposes, two styles became distinct, the rapid cursive, and the formal book-hand. In the 9th century, the M., which had been gradually evolved during previous ages, practically superseded the uncial lettering for general use, though in scholastic and religious books much of the latter was retained. As time went on both Latin and Greek M. became still retained. smaller and more flowing. present English handwriting Our mainly founded on the Italian 15th century style.

Minusinsk, a tn. of E. Siberia, in the gov. of Yeniseisk, near the Yenisei, 328 m. S. of Krasnoyarsk. Pov. 10,000.

Minute (Lat. minutus, small): 1. Of time, being the 60th part of an hour. 2. Of an arc, being the 60th part of a degree in the measurement of a circle.

Minute Men was a popular title for the soldiers of the militia during the American War of Independence, and

war (at a minute's notice).

Minyse were a Greek race of heroes, oelebrated in the ancient epics. Their founder was Minyas, the King of Bœotia, and their head-

between the Ollgocene and Pliocene, sible for the delegation of individual and containing fossils of living species shares of the taxes for the communc. in intermediate ratio (25 per cent., A number of Ms. unite to form a

in 1813, he received an earldom, and of this age in the British Isles, but at his death was buried in West-small beds are found at Bovey Tracey and in the island of Mull. Elscwhere thoy are widely distributed over the They consist of sandstones, world. gravels, clays; of limestones, marls, clays, and sands; and contain marine shells, mastodons, rhinoceroses, lions, apes, deinotheria, three-toed horses, camels, beavers, tapirs, etc., conifers, beeches, oaks, maples, walnuts, poplars, magnolias, etc. The Eningen beds in Switzerland have contributed largely to our knowledge. The period of formation, the M. epoch, was that of the final uplifting of the present great mountain chains. Europe the formation is estuarine and lacustrine mainly, and indicate a configuration of shallow seas and large inlets very different from the present. The climate resembled present. The climate rethat of India and Australia. magnolias, acacias, figs, evergreen oaks were among the typical vegetation; insect life was larger and more varied. During this epoch Britain remained land subject to denudation, and the evidence of the removal of hundreds of feet of solid rock by this slow process gives some idea of the duration of the period. There are evidences of a gradual cooling of the climate towards present conditions, but the more tropical times are represented by beds of coal in Greenland and Spitzbergen. In Britain the chalk hills remain as evidences of the earth movements of the time. For excellent and brief account see Geikie's Class Book of Geology, 1899.

Miquelon, Great and Little, islands off the S. coast of Newfoundland. forming with the adjacent island of St. Pierre, a French colony, and covering a total area of 93 sq. m. G. and L. M. are connected by a narrow isth-mus. The inhabitants are almost

entirely occupied with the fisheries, the islands being barren and rocky, and unfit for agriculture. Capital, St.

Pierre. Pop. about 6000.

Mir, the name of a vil. community refers to their hasty preparation for of Russia. There are three classes of local elected bodies in Russia which have administrative functions, the Minyæ were a Greek race of have administrative functions, the heroes, oelebrated in the ancient mir and the volost, the cuistros and epics. Their founder was Minyas, the municipal dumas. The M. conthe King of Bœotia, and their headquarters was Orchomenos, though louseholders of the village; women louseholders in Thessaly was a famons rettlement. Their descendants, the setting an absent husband. These Argonauts, who founded a colony in Lemnos, often called thomselves M. Miocene (Gk., less recent), a geological name for Tertiary strata lying tice of communal taxes, was responsible for the delegration of individual volost, or eanton, with an assembly of hooks allowed him, and concealed the delegates elected from the different MS. in the lining of his clothes. Com-The institution of the M. is of very great antiquity, but the patri-nionial jurisdiction of the landowners was not withdrawn from it until the

emancipation of the serfs in 1861. Mira (o Ceti) (Lat., wonderful), the first variable star discovered; name also given to the class of long period variables. Brightest, 4th to 2nd magnitudes for a fortnight, decreases for three months; invisible for five: recovers during next three. Both periods and brightness very irregular. On average, visible during eighteen weeks, appearing twelve times in eleven years. Discovered by Holwarda (1638-Fabricius (1596). 39) recognised variability. Helyclius (1648) commenced systematic observation. Other observers, Sir Wm. Hersehel and Argelander.

Miraband, Jean Baptiste (1675-1760), a French 'bittérateur,' born at Paris. He first became a soldier, and later acted as tutor to the daughters of the Duchess of Orleans. In 1724 he pub-lished a translation of Tasso's Jerusalem Delivered, and two years later was elected a member of the French Academy. He also wrote Alphabet de la fée Gracieuse, translated the Orlando Furioso, and published several philosophical and other treatises.

Mirabeau, Andre Boniface Riqueti, Vicomte do (1754-92), a brother of the great statesman, joined the Freneh army, where he distinguished himself

1781, in 1789 he became a deputy to the States-general, where as a reactionary he bitterly opposed his brother. His corpulence and drunken habits won him the name of Mirabeau Tonneau (the Barrel). Emigrating to Germany in 1790 he quarrelled with everyhody as usnai, until he died of apoplexy.

Mirabeau, Henoré Gabriel Riqueti, Comte de (1749-91), one of the greatest figures of the French Revolution. born at Bignon, was a son of Vietor, Marquis de Mirabeau (q.v.). After a stormy youth, during which his father several times procured lettres de cachel for his imprisonment, he capped all former offences by running away with Mme. de Monnier, he himself being already married. After a brief sojourn in Switzerland, the two went to Holland, where M. earned a living by literary work. Having replied to his father's dennnelations by some violent libels, he was arrested in defiance of international law and imprisoned at Vincennes for over three

ing for a time to England, he subsequently obtained leave to return to Paris. In 1786 he was sent on a secret mission to Berlin. Soon after his return he wrote an essay on La Monarchie Prussienne, and later published a full account of his mission, with all his private reports. This and other indiscretions led to his exile from Paris. But when the States-general were eonvened (1789), heing rejected as a representative by the Provencal nohlesse, he appealed to the people, and became deputy for Aix. came the great period of his eareer. In spite of his wild character, he had strong praetical views in poblics, despising empty chatter, and deprecating extreme measures on either side. His power with the people was immense. yet he sought to use it not to over throw but to re-model the monarchy somewhat on English lines. Had he lived a few years longer, and had the court followed his advice, the Reign of Terror might have been averted. See Carlyle's French Revolution; Charavay's 'Mirabeau,' in La Grande Encyclopédie; C. W. Warwick's Charavay's Milason W. Warwick Encyclopédie C. W. Warwick Mirabeau and the French Revolution, Mirabeau, by Louis

Barthou (French Premier), translated by G. W. Chrystal (1913). Mirabeau, Victor Riqueti, Marquis de (1715-89), a French political economis, horn in Provence. As an author, his Théorie de l'Impol brought him a term of imprisonment, and afterwards seelusion on his estate, but continuing to write he founded a school of political economy. health and fortune were finally ruined by constant family quarrels and law-suits. He was the father of the

famons Honoré. immons Honore.

Mirabella: 1. A fn. of Italy in the prov. of Avellino, 13 m. S.E. by E. of Benevonto: pop. 7500. 2. A fn. of Sleily in the prov. of Catania, 6 m. N.W. of Catagirone; pop. 5500.

Mirabilis, a genus of perennial plants (order Nyctaginacea). M. defermer is the marvel of Dorul.

is the marvel of Peru, a ialana fragrant garden plant with flewers of various colours.

Miracle Play, a term used in Eag-land for the plays dealing with serip. tural and sacred subjects frem about the 13th century to the end of the 16th century. In France the term 16th century. In France the term 'miracle' was restricted to dramas dealing with the lives of the saints, while the scriptural plays were knews as 'mysteries.' But this latter term was not used in England. The origin of the M. P. must be sought in the dramatic representations of the great years. Here he wrote his famous events of the Christian year rendered Lettres de Cachet in the biank leaves of liturgically in churches, especially at

example we have of such a liturgical drama dates from the year 967 (see Manly's Specimens of Prc-Shakesperean Drama) and from this time the development is steady, blending both Norman and Saxon lines of growth. The stagecraft of the church dialogues heeame more and more claborate, until they had to pass into the open. Here the elerical element diminished, and lay actors took the place of priests and cantors. During the 11th and 12th centuries, the M. Ps. passed into the monastery schools for teaching purposes. Originally, all these plays were in Latin and were dedieated to St. Nicholas, the patron of youth, but in the 12th century they were interspersed with French. The institution of the festival of Corpus Christi, instituted in 1264, but not commonly observed in England till a good many years later, gave a great impulse to pageantry, and the great 'eycles' of plays are nearly all con-nected with this feast. The 'cycle' consisted of a series of plays dealing with events from the Creation onwards, and each play was acted on a pageant ' or stage of two stories on wheels, which was dragged from place to place for the repetition of the drama. There are four main cycles extant, all showing traces of con-tinuous redaction. The York cycle tinuous redaction. The York cycle (16th century MS.) consists of forty-nine plays, the Wakefield or Townley plays (MS. 1450) are thirty-two in number, the Chester cycle (MS. 1476). 1475) has twenty-five, to he acted not at Corpus Christi but at Whitsuntide. The Coventry oyele (with forty-two plays) dates from the latter half of the 15th century. The plays were acted by the city com-panies, each company or guild heing responsible for the production and acting of one play. The miracles are marked hy considerable dramatic skill, and show in a somewhat un-developed form the treatment of all the main dramatic motives. A particular feature is their realism. Pollard's English Miracle Plays, etc., 1895, and in Dent's Everyman series, Everyman, with other Interludes, 1909.

Miracles. According to the defini-tion of St. Thomas Aquinas, 'A miracle is outside the order of all created nature; therefore God alone can work miracles by His own proper power, since He alone is not a In the early and middle creature.' ages M. were considered as the most cogent proof possible of the truth of Christianity. The idea of the con-

Christmas and Easter. The carliest | however, what was once one of the chief reasons for giving assent to the Christian faith has become one of the chief obstacles to its acceptance, and the case has been rendered more complicated by the precipitance of certain over-zea in their to the desire to modern eptable manner, have done their best entirely to remove the element of the mystery and the miraculous. The generality of critics, however, are not disposed longer to continue the task of removing the supernatural from the natural in the N.T. narratives. In the words of Dr. Bruce (Ency. Bib. ii., eoi. 2455). the healing ministry (in the Gospels) judged by critical tests, stands on as firm historical ground as the best accredited parts of the teaching." Spinoza was the first in modern times to make a vigorous attack on the eredibility of M. His statement on the subject is that 'nothing happens in naturo which is in contradiction with its universal laws, and thence, since M. are a violation of the laws of nature, he argues that they cannot happen. But 'the presuppositions of the critical mind need examining no less than those of the orthodox, and here the presupposition lies behind the word nature. Does Naturo include God and the spiritual world, or is Nature regarded as comprising the physical universe alone? If the former be the case, are M. contrary to its laws? Surely that is the whole point at issue. The English deists also denied the possibility of M., and the case against them was most ably He accepts the stated by Hume. argument from experience, and turns it against Christians by appealing to the 'firm and unalterable experience which has established the laws of nature, and goes on, 'The conse-quence is that no testimony is suffi-cient to establish a miracle, unless the testimony be of such a kind that its falsehood would be more miraculous than the fact which it endeavours to establish. Or, briefly, it is contrary to establish. Or, briefly, it is contrary to experience that a miracle should be trne, but not contrary to experience that testimony should be false. Here again the point in question is taken for granted. As Paley pointed out—if by experience Hume means all experience, he hegs the question, if he means general experience, he has merely proved what was never disputed, viz. that M. are uncommon. Spinoza had tried of limitate the superpatural element. to eliminate the supernatural element in the Gospel M., and to treat them as natural events. Strauss had explained tinuity of natural phenomena and of the unity of the universe was hardly them as myths growing up in the thought of, and belief in M. pre-sented difficulty to hut fow. Now, with their preconceived notions of the

Messiah. against M. does not, generally speaking, follow the lines of Spinoza or Strauss, of Hume or of Mill. It can briefly he summed up in the words of Matthew Arnold, 'miraoies do not Matthew Arnold, 'miraoles do not happen.' On the other hand, the position of a present-day apologist is well given in the words of D. Figgis (Gospet and Human Needs, ed. 1912, p. 12), 'Miracles are but the expression of God's freedom; the truth that He is above and not merely within the order of nature. Disbelief in them really leads on to pantheism. Displaying this truth of God's liberty and personality, they arouse no doeper speculative difficulties than does the common daily fact of human free-will-perhaps even less. . . we have once surmounted the cardinal crux of human freedom, there is no real ground for hoggling over miraeles. Tho literature of the subject is enormous. See especially writings of Hume, Pascal, Butler, Paley, Trenoh, Mill, M. Arnold, Westcott, Bruce, Newman, and Illingworth.

Miraflores: 1. A tn. of Colombia, S. America, in the state of Boyaca, 25 m.N.E. of Guateque. Pop. 12,000. 2. A seaside resort of Peruin the prov. of, and 4 m. S. of the city of Lima. Mirago, the name given to various

phenomena due to reflection and re-fraction of light in unusual states of the atmosphere; commonest and most striking in regions of calm sub-jected to great heat or cold, e.g. hot and cold deserts and polar regions. Generally speaking, two strata of different densities lying steadily one over the other give rise to two images. one direct and usual, the other an inverted reflection from the surface of contact. Thus clouds may he reflected from a thin stratum of dense air on the sand of deserts at sunset and after, giving the appearance of water; the convectional currents of air give a shimmering or wavy appearance, thus adding to the illusion. At sea, the layer of air on the water may in calm weather remain warmer for some height, giving an inverted reflection from above of ships below the horizon. Irom above of samps below the horizon. In the early morning, the latter effect occurs over deserts, tho former at sea. It is quito possible for the patient observer to find M. over roads in England hy placing the eye a fow inches above the ground, e.g. in calm, hot weather, when the air is quivering. Looming is a form of M.; the object appears nearer and larger; it is well known at sca, when objects below Attempt to effect a Revolution in S. the horizon are yet visible. Special America: Dumourica, Minoires. In Special Minarda de Ebro, a tn. of Spala la Brocken' and the 'Fata Morgana' the prov. of Burgos, 44 m. N. E. of the (q.v.). Owing to the rays of light town of that name, on the r. b. of the coming over great distances, and the Ebro. Pop. 6000.

The modern argument variation in density gradual, they loss not, generally speakare curved, and the image will be the lines of Spinoza or seen along the tangent of the ray at the oye; this accounts for the displacement.

Miragoane, a com. and scaport of Haiti, W. Indies, on the N. coast of the S.W. Peninsula, 50 m. S.W. of Port-au-Prince. Pop. 120,000.

Miraj, a native state of the Deccan,

Miraj, a native state of the Deccan, India, in Bomhay Presidency. Area 564 sq. m. Pop. 125,000. Miraj, the cap., stands near the Kistna, 70 m. W. of Bijapur. Pop. 20,000.

Miramar, or Miramare, a magnificent Austrian imperial palace on the Adriatic, 6 m. N.W. of Trieste. It helonged formerly to Maximilian, Empary of Maria (1864-67) but is Emperor of Mexico (1864-67), but is now thrown open to the public.

Miramichi, a river of Canada, rising in New Brunswick. Its course of 230 m. is generally N.E., emptying itself into Miramichi Bay in the Gulf of St. Lawrence. The port of Chatham stands at its mouth, and in the upper part of the river much salmon and trout fishing is carried on.

Miranda (formerly Guzman Blanco), a state of Venezuela on the N. Carib-hean Sea, W. of Bermudez. Moun-tainous in the N., it embraces also

tannous in the N., it eminraces also rich pastoral and agricultural regions, and fine coffee is produced. Ciudad de Cura and Ocumare are the chief towns. Pop. ahout 484,510.

Miranda (or Sá de Miranda), Francisco de (c. 1495 - c. 1558), ono of the carliest Portuguese poets, studied iaw at Lisbon. He wrote in the 'Italian style' (using the metres of Paule and stylo ' (using the metres of Dante and Petrarch), but mainly in Castillan. His poetical epistles and ociegues are his most noted works. Ho also wrote iyrics, sonnets, and comedics. See Collected Works (ed. 1595), also Michaelis Vasconcellos ed. with blog.

(1885). Consult Machado, Bib. Lustana; Do Varnhagen, O Panorama.

Miranda, Francisco Antonio Gabriel
(c. 1752-1816), a Venezuolan patriet
and general. In 1806 he made an
unsuccessful attempt to found a republic in Venozuela and throw off the Spanish yoke. After 1810 he commanded the patriot army there and was supported by Boliver. In 1812 M. was forced to sign a treaty ylolding. the country to the royalists. He established secret societies, such as the 'Gran Reunion Amorleana,' with which the 'Lautaro Society' was later affiliated (1812), and had much influence with European statesmen. See Biggs, History of Miranda's Attempt to effect a Revolution in S.

Mirandola, a fortified tn. of Italy in the prov. of, and 17 m. N.N.E. of the city of Modena. Pop. 20,000. Mirandola, Giovanni Pico, Count Della (1463-94), a famous scholar of

the Italian Renaissance. He studied philosophy and science, and at the age of twenty-three he was one of the first of European scholars. Some envious rivals insinuating heresy in his doctrine, M. replied with a learned Apologia, and devoted himself thenceforth to an austere life. Becoming a professor at the Platonic Academy, Florence (founded by Cosmo de' Mediei), he published many learned works, including Heptaplus, a cabalistic work on the Creation, De Ente et Uno, an attempt to combine the teachings of Plato and Aristotle, and a treatise against astrology. Among his intimate friends were Lorenzo de Medici, Politian, and other men of the greatest eminence.

Mirbelia, a genus of Australian shrubs (order Leguminosæ), with yellow, lilao, or purple flowers, some-times grown in greenhouses.

Mircea (1386-1418), voivode or prince of Wallachia, styled himself 'count' of Severin, despot of the Dobrudja and lord of Silistria, and was also master of Sistova and Vidin. As an ally of Sigismund of Hungary his former bush here. Hungary, his former rival, he was defeated in 1396 by the Turkish sultan, Bayazid I., but tho following year he gained a victory over Bayazid at Craiova. In 1416 ho lost Bayazid at Craiova. In 1416 ho lost Silistria to Sultan Mohammed I., and was obliged to acknowedge Ottoman dominion.

Mirecourt, a tn. of France in the dept. of Vosges, on the R. Madon, 27 m. S. of Nancy. Pop. 5500.
Mirfield, a par. and tn. of W. Riding of Yorkshire, England, on the R. Calder, 4½ m. N.E. of Huddersteld. field. There are collieries and malting works near, and the chief manufs. are blankets, carpets, and cloth. Pop. (1911) 11,712.

Mirgorod, a tn. of S.W. Russia, in the gov. of Poltava, 50 m. N.W. of Poltava city, on the R. Khorol. Tiles and linseed oil are manufactured. It suffered much in the Polish wars.

Pop. 11,000.

Mirim (Sp. Laguna Merin), a coast lagoon in the extreme S. of Brazil in Rio Grande do Sul. Northwards it empties into the Lagoa dos Patos by the R. São Gonçalo.

Miropole, or Miropolye, a tn. of Central Russia, in the gov. of Kursk. on the Psiol R., 82 m. N.N.W. of Kharkoff. Pop. 11,000.

Miranda do Corvo, a tn. of Portugal strument of glass or metal, having a in Beira. 10 m. S.E. of Coimbra. polished surface to reflect images. Pop. 6000. The use of Ms. is very ancient: they wero known before our era in Greece and Italy, being then mostly thin plates of polished metal. Under the Cæsars silver Ms. were common. The back of the M. was often handsomely adorned with chasing or repoussé. In the middle ages, steel, silver, and glass Ms. were much used, the glass being backed with metal, especially lead. Modern 'silvered' Ms. were first known as Venetian, having been first made on a large scale at Murano. Their manuf, was first introduced into England in the 17th century.

Mirs Bay, an opening on the S. coast of China, E. of Hong Kong. Length 140 m., breadth 60 m. Great Britain leased the S. shore in

1898

Mirza, a contraction of the Persian 'Emir Zadah' (son of the prince), meaning 'Mr.' when it precedes the surname and 'Prince' when it follows it.

Mirzapur, a tn. and dist. of the United Provinces, British India. on tho r. b. of the Ganges, 30 m. from Benares. The town is noted for its

carpets and rugs. Other manufs. are shellao and metallic wares. Pop. of dist. 1,100,000; town, 80,000.

Misamis, a prov. of the N. cosst of Mindanao, Philippine ls., including Camiguin Is. Its irregular coast-line contains Higan Bay. There is much mountain and tower land. Disa much mountain and forest land. Rice, abaca, cacao, sugar, and cotton are produced. The town of the same name in N.W. Mindanao is 55 m. from Cagayán. Gold, sulphur, copper, and coal are found near. Pop. of prov.

and coal are tour. 180,000; town, 6080.

The M. of property by any person who has been entrusted (solely or jointly with another) with or has received such property either for safe custody, or that he may apply, pay, or deliver the property or its proceeds for a particular purpose, or to a particular person, is a misdemeanour, punish-able with penal servitude up to seven years (Larceny Act, 1901, replacing analogous sections in the Act of 1861). Bankers, merchants, brokers, and others guilty of M. are bit by this Act, while M. by trustees on an express trust created by deed or will. or by mortgages, or by factors, or agents generally, is similarly punishable under the Lareeny Act of 1861 (see also LARCENY). It is difficult to see on what principle M. by the above kinds of hailees should be only a misdemeanour, while embezzlement by clerks or servants, i.e. persons usually much lower in the social Mirror (Fr. miroir), an optical in-scale, should be a felony, punishablo

Miscarriage, see Abortion.

Misdomeanour, see CRIMINAL LAW.
Miseno Capo (ancient Miscoum
Promontorium), a promontory of S.
Italy, at the N.W. extremity of the
Gulf of Naples, 9 m. from Naples.
The ruins of the ancient Roman
port are near by Linder Augustus it port are near hy. Under Augustus it was an important naval station. The Saracens destroyed the old town in 890 A.D.

Miserere: 1. A name under which Psalm li. (Vulg. l.) is commonly known. Four psalms commence with the words Miscrere mei Deus, but the pre-cminence of this psalm has led to mineral from which arsenic is pre-the name being appropriated to it.

M. is the greatest of the penitential elercy, psalms, and tradition states that it was called forth hy tho prophet obtained commercially from U.S.A.

Nathan's announcement to David of this pine and Germany. his sin. 2. An inaccurate form often found for misericord, a word derived from Lat. misericordia, pity, and so applied to various relaxations of strict monastic rule. It is best known as the designation of a small ledge under the seats in quire, which, when the seat was turned up, formed a projection on which the monk could rest when standing.

Misericordia, or Brethren of Mercy, the most famous of the confraternities formed in Florence in 1240 for the seemly hurial of the destitute. During the plague of 1348-49 they were very active in prosecuting their mission. The memhers, when on duty, wear a strange dress covering all but the eyes.

Mishawaka, a tn. of Indiana, U.S.A., in St. Joseph co., on St. Joseph R., 72 m. S.E. of Chicago, with manufs. of agricultural imple-

ments, machinery, and paper pulp.
Pop. (1910) 11,886.
Mishmee Bitter, see Copyrs.
Mishna, the traditional commentary on the written Hebrew law, handed down orally until about the beginning of the 3rd century of our cra, when it was finally committed to cent. A M. to be fraudulent must writing. The M. consists chiefly of amount to a mis-statement of a that the discounter of which between the discounter of the the discussions of rabbis between the year 70 and the time of writing. After 200, still further discussions on the must have known it to be false, er law and the M. went on in the schools both of Bahylon and of Palestine. These further discussions constitute the Gemara, which, with the M., forms

with penal servitude up to fourteen tracts of forest and pasture land, years. See Embezzlement. Timber, 'yerha mate' (Paraguay tea), wheat, tobacco, and sugar and produced, and cattle are raised. Posadas is the chief town. Area about 11,300 sq. m. Pop. of territory

43.000; town, 5000. Miskolez, a tn. of Hungary in the prov. of Borsod in the valley of the Szinva, 24 m. N.E. of Erlau. The manufs. include. hoots and shees, porcelain, leather, snuff, etc., and in the vicinity are stone quarries and iron mines. There are large government iron and etcal works of Dieses. ment iron and steel works at Dies-Gyor, 5 m. to the W. Pop. 44,000. Mispickel, or Arsenical Pyrites, a mineral from which arsenic is pre-

Misprision (literally, neglect or centempt) means conecalment of a crime in the sense of keeping one's knowledge of its commission to oneself without participation in it either as principal or accessory. In this its more usual sense (called negative M.) it closely resembles the act of an accessory after the fact who conceals a criminal. Positive M., on the other hand, means any great innominate misdemeanour or one not falling within a known category, c.g. maladministration of public officers (see also CRIMINAL LAW). M. of treason was formerly, but is not now, regarded as equivalent to the full offence.

Misratah, Masrata, or Mesurata, a tn. of Tripoli, on the N. coast, 118 m. S.E. of Tripoli. It is noted for carpets. Pop. 8000.

Misrepresentation. In the law of contract a M. or false statement of

material fact and not a mere expression of opinion; the person making It have made it either without believing it to be true, or recklessly, without caring whether it were true or false: it must have been intended by the the Gemara, which, with the \$1., forms the Talmud. See Jews.

Misilmeri, an industrial tn. of Sieily in the prov. of Palermo, on tho Georgian Sm. S.E. of the town of Palermo. Pop. 13,000.

Misiones, a territory in the N.E. Argentine Republic, with the Parana Republic, with the Parana (R.W.), and the Uruguay R. separating it from Brazil (S.E.). There are

action to enforce it and counterclaim | ambassador, for a declaration that the contract is void. If he elects to suo for rescission, he must do so within a reasonable time, so as not to involve loss to in-The old comnocent third parties. mon law gave no remedy for innocent M., hut now all courts, conformably with equitable doetrines, will rescind a contract at the instance of a party who has heen induced to enter into it by reason of a false though inno-cently made statement in a material particular; but the injured party is not entitled to claim damages, except (1) under the Directors' Liability Act, 1890, for false statements in a com-pany prospectus. But it is a good defence that the maker had good ground for helloving his statement to be true (2) Against an agent who holds himself out as heing authorised to contract for another when he is not. Missal, the hook containing all the

prayers and official ritual required for the due celebration of Mass throughout the year. The office of the Mass consists of an invariable framework known as the Ordinary, and a large number of prayers, etc., which change throughout the year. Formerly these variable portions were found in separate volumes, such as the Antiphonary, Graduale, Episiolarium, etc. The process of combining them into one volume became general before

1000 A.D., probably arising about 900.
Missel Thrush, Mistletoe Thrush, or
Holm Thrush (Turdus viscivorus), a
common hird throughout England and most European countries. male is 11 in.long, and is the largest of British thrushes and also of British song hirds. Its colour is greyer than the song thrush, and in flight a white tail feather is shown upon each thigh. The song is not so varied and mclodious as that of the song thrush. The eggs are hlulsh white, spotted with purplish brown. The food consists principally of berries and insects. It is sometimes called the 'storm cock.'

Mission, a foreign legation, or, col-lectively, the members of an embassy, as, e.g., the British M. at Peking. Secretarics and attachés are not, as a rule, employed in the same M. or embassy for more than two years, subject to the Foreign Secretary deciding to extend the term for public reasons. The duration of the appointments of heads of Ms. at foreign courts me not exceed five years, at the end which time the appointment is r newable by the Foreign Secretary, desirable on public grounds. Men-bers of Ms. retire at seventy years of age. The chief of a M. is styled in the Foreign Office regulations 'minister,' mext century an attempt was made to whether his official title he that of

minister, orchargé d'affaires. Missions. The command given by

Jesus to his disciples to preach the gospel throughout the world, bap-tising in the Triune Name, has been carried out by Christians in every age, though sometimes with hut little vigour. During the first centuries the spread of the faith was exceedingly The Book of the Acts of the rapid. Apostles tells of the evangelisation of Asia Minor, and the introduction of the Church into Europe. In the 2nd century Roman Gaul largely accepted tbe faith of Christ, and one of the most important documents of the century is that telling of the persecutions at Lyons in 177, when Pothinus was bishop. To this century we may possibly assign the introduction of Christianity into England (Bede, Hist, Eccles. cap. v.). N. Africa was early visited by missionarics, and during the early centuries the African church was one of the most vigorous and flonvishing. The dates of the beginnings of missionary enterprise to the E. of Paiestine are uncertain. By the 3rd century there was a flourishing church in Persia and also in Armenia. During the 4th century Christianity continued to spread in Gaul, Engiand, and Spain (all of which countries suffered under the nersecution of Diocletian), and was introdnced into Ahyssinia and Switzor-land. In 376 the Goths were allowed by Valens to settle in the province of Mœsia, where they immediately came under Christian influence. Whether their first missionaries were Catholic or Arian is uncertain, but at the end of the century their bishop, Ulfilas or Wulfila, famous for his translation of the Scriptures into Gothic, was cer-tainly an Arian, and most of the mis-sionary work that followed amony Visigoths and Ostrogoths was of this type. In the 5th century occurred the ovangelisation of the Irish under St. Patrick and of the Frankish peoples who had entered Gaul from beyond the Rhi

passed Scotlan ciated

Columba, Aidan, and Cuthbert. Augustine's M. to England landed in 596, and in the century that followed the faith spread once again over the land, whence it had been swept away

Scandinavian races, and this work was continued during the three following centuries among the Danes, Norwegians, Icelanders, Poles, Magnas, and the Slavs of Eastern Europe. By the 11th century Russia was mainly converted. During the 13th and 14th centuries missionary enterprise slackened, and a timo of reaction set in.

The 15th century was one of great expansion, and the discovery of a new continent beyond the seas opened fresh fields of vast extent for missionary enterprise. The work was mainly taken up by Spanish Dominicans, Franciscans, and Jesuits. It is to these societies that Roman Catholio missionary work has been mainly confided. To the last named helonged the best known of the missionaries of

icis Xavier, who the East from ence the Jesuits

made their way to China, where but little was done till the time of Father Ricci (q.v.). In 1663 the Seminary des Missions Etangéres was founded in Paris, and Roman Catholic missionary work was carried on mainly in the Indo - Chinese peninsula. In 1822 L'Œwre de la Propagation de la Fri was founded at Lyons, to supply the foreign M. of the Church with men and money, a work which it has carried out with marked success. In more recent times St. Joseph's College of the Sacred Heart for Foreign Missions has been founded in England hy the exertions of Bishop Vaughan for the education of missionaries. All Roman Catholic missionary organisations come finally under the jurisdiction of the Sacred Congregation of Propaganda at the city of Rome.

The countries which broke away from the Roman obedience at the time of the Reformation felt at first unable to undertake the charge of any M. The first government to take the work in hand was the Council of Geneva, which in 1555 sent missionaries with a colony to Brazil at the advice of Coligny. But the colony was destroyed and the attempt failed. The state of Sweden attempted the conversion of the Lapps in the N. of his own dominions, again with but little success. These two ventures were the beginning of Protestant missionary work, but bardly any progress was made for over a century. A few details may be registered. When the Virginia Company took up the colonisation of America, it was provided that the colonisation should be accompanied by missionary work, and for the expenses of this Sir Walter Raloigh gave £100. In 1602 be well to the Dutch East India Company tried

colonies, but the conversions were mostly conversions only in name. The attempt, however, was attended with success in Java and the surrounding islands, for here the Scriptures had been made available in a translation. In 1621 the Dutch made an attempt to found a M. in Brazil. The question of foreign M. received the consideration of the English parliament during the Protectorate of Cromwell, and as a result the Corporation for the Propagation of the Gospel in New England With this was founded in 1649. corporation was connected the famous missionary John Eliot, the first to translate the Bible into a heathen ianguage in modern times. His Indian Bible was published in 1683. Two years before the close of the century a great event occurred of special importance in the history of M. The Society for Promoting Christian Know-ledge was founded within the Churches England in 1698, and since that date the scope of its activities has been ever widening. It now issues about fourteen million copies of tracts or hooks each year. The work of the S.P.C.K. was supplemented in 1701 by the foundation of the Society for the Propagation of the Gospel in Foreign Parts, intended primarily for promoting Christian religion in our foreign plantations.' Within the iast hundred years the scope of its activities has been immensely increased, and it now undertakes missionary work in all parts of the globe. It has now over 700 missionaries, male and female, working in nearly 5000 stations throughout the British Empire. To the S.P.C.K. helongs the credit of having saved the Danish M. to India (founded in 1704) from the extinction with which it was threat-ened after the death of its founder. The first Christian body to take corporato action in the matter of foreign M. was the tiny community of the Moravian Brethren, who in 1732 sent out thoir first missionaries to St. Thomas in the W. Indies. They have now stations in Greenland, N. and S. America, S. Africa, Australia, and Tibet. In 1906 they had 200 male workers, 194 female workers, and 1838 native helpers. The example and writings of the Moravian Brethren, togother with the influence of such men as Whitefield and Wesley, dld much for the revival of religious ch thusiasm in England, and from this time date the foundation in England of a largo number of Protestant societies for carrying the gospel to

Society was founded in 1792, and United Methodist Free Churches Home Carey and Thomas were sent as its and Foreign Missionary Society first representatives to the shores of (founded 1857), with 40 missionaries India. Ever since that time William in Anstralasia, China, Africa, and Caroy, the shoems the Welsh Calvinstite of the most fasein Foreign Missionary Society in the history of

The London Miss founded in 1795, ginning the name of The Missionary | work among t

ter still remains, it is now almost en- missionaries in India, the latter with tirely in the hands of Independents. The first work undertaken by the L.M.S. was in the South Seas, and it definite part of its work was first has since extended to S. Africa, India, urged upon the Presbyterian Church has since extended to S. Africa, India, China, Madagascar, and New Guinea, besides devoting much energy to the conduct of home M. It has 285 missionaries and an annual expenditure of some £150,000. In 1797 was founded the Church Missionary Society, which took its present name in 1812. The C.M.S. represents the Evangelical party in the Church, while the S.P.C.K. lays more stress on the Catholio aspect of Anglicanism. It is the greatest of the Church of England societies, with an income of about £100,000. It has in its service about £400,000. It has in its service of 10 ordained and 155 lay missionaries, to 10 ordained and 155 lay missionaries, 1300 missionaries working in various parts of the world. Its income is £137,500. All the Presby-360 natives in orders, and 400 women. Connected with it is the Church of churches as such and not by England Zenana Missionary Society, to 10 order of 1880. With the S.P.G. are connected several small M. to particular districts, such as the Oxford Mission to Calculfa (founded 1881), and the Bombay and Poona Missions (founded 1865), carried on by the Cowley Fathers of the Society of St. John the Evangelist. Other prominent Church of England M. of more restricted scope than the M. described above may be briefly noticed here. The Melanesian Mission restricted here. restricted scope than the M. described above may be briefly noticed here, above may be briefly noticed here. The Melanesian Mission was founded in 1841 by Bishop Selwyn, and is consciousness. In connection with the neeted principally with New Zealand. C.I.M. is the Bible Christian Foreign The Universities' Mission to Central Mission. It is impossible here to speak in detail of the American missioner was founded in 1859, and has Africa was founded in 1859, and has about 150 workers in the districts it about 150 workers in the districts it sionary societies, of which the chief serves. It also supports two bishop- are the Board of Commissioners for rics. The W arose in

Thomas C missionary

great success, and was and in 1004 to pla-Au

pla S. aries at work, and of nearly £125.000. M. are the Methodi Missionary Society with 9 missionarie

-840), with 11 missionaries nd

naricsin Africa. Presbyterian y societics were founded by Presbyterians in 1840 and

Though its undenominational charac- of these labours with 33 ordained 38 in China. The carrying on of foreign missionary undertakings as a of Scotland in 1824 by Dr. Inglis, and his motion was successfully carried through. Before that time some un-denominational work had been done acnominational work and been done by the Glasgow Missionary Society and the Scottish Missionary Society. The state oburch has now 123 Euro-pean missionaries working in India, Africa, and China. Its income is above 250,000. The United Free Church Missionary Society is a triumph of enthusiasm and skillful organisa. of enthusiasm and skilful organisa-

and Presbymissionary work the Bible

> ...- ---- digleets disociety

-- the wantened also does much work in this following statistics of ssionary socioties are S. Dennis's Centennial ign Missions, 1902:

		E,	Stations		
National or Continental Division	Number of Societies	Total of Foreign Missionanes	Principal	All other Stations	Nativo Christians
American Continent . Great Britain and Ireland . Continent of Europe . Asia Australasia and Oceania . Africa	128 154 82 117 35 42	5,203 9,434 2,519 508 487 531 18,682	1,490 3,765 776 226 240 822 7,319	7,351 9,078 2,371 594 1,516 2,307 23,217	1,653,417 1,428,469 537,724 255,323 167,477 481,154 4,523,561

françaises, and the publications of the Propaganda. For Protestant M. and M. in general, see A. Beer's Foreign Missions, what they have done and how they may be extended, 1909; Collock's Story of the Church G. sionary Society, 1909; J. Richter'e sionary Society, 1903; J. Richter's Allgemeine evangelische Missions-geschichte; G. Warnock's Oulline of a History of Protestant Missions, 1906; E. M. Bliss's The Missionary Enterprise, 1908; H. H. Montgomery's Mankind and the Church, 1907; Lovett'e Hist. of the London Missionary Society, 1899; Guinness'e Story of China Inland Mission; W. A. Tatchell'e Medical Missions in China, 1909. See also biographics of the great missionaries and the publications of the various misslonary societics.

Mississippi, a southern etate of thc U.S.A., honnded on the N. by Tennessee, on the S. by the Gulf of Mexico and Louisiana, on the E. by Alahama and the R. Mississippi, and on the W. by Louisiana and Arkansas. The general surface is low with a trend towards the S. and S.W. A fow miles from the shore is a chain of low sandy islands, which forms the Bay of St. Louis on the W. and Pascagoula Louis on the W. and Pascagoula Sound on the E. The delta region and the littoral generally is sandy and unlicalthy, but there are immense cotton, rice, and tobacco crops in the lowlands hy tho Mississippi R., and its sluggish tributary, the Yazoo. Farther N., on the uplands and bluffs, pine, oak, walnut, and magnolia trees abound, but in the islands and sandy

See for Roman Catholic M., Hen-rion's Histoire des Missions Catho-the S., and fevers are frequent in the liques; Durand's Missions Catholiques bottom lande. The soil is, on the whole, extremely fertile, and agriculture is a very important industry; indeed the etate is the greatest cotton growing country of the world. Indian corn, rice, wheat, rye, and oats are also grown in large quantities, and the eugar-cane is cultivated in the southern part of the state. The principal vegotablo is the sweet potato but the common potato, peas, and beans, and most of the vegetables known to European countries are also Plums, peaches, figs, and grown. are abundant. Manuic. oranges formerly confined to the requirements of an agricultural state, are improving, and among the chief are lumber and timher, turpentine and resin, cotton-seed oil and cake, cotton goods, and fertilisers. Cap., Jackson (21,262): chief towns, Meridian (23,285) and Vickshurg (20,814). M. was ceded by the French to Great Britain in 1763; in 1798 it was organised as the territory of the Mississippi. In 1817 the territory of Alahama was organised from the Mississippi territory, and in the same year Mississippi was admitted to tho Union. Tho state suffered from flood in the spring of 1912. A dike at Greenville burst, and about 1300 sq. m. in the lower Yazoo district were inundated. Area about 47,000 sq. m. Pop. (1910) 1,797,111, of which 1,009,487 are negroes. This shows an increase of the total pop. of 15.8 per cent. over 1900, as against 20 per cent. of 1900 over 1890.

Mississippi River, the most important river of N. America, rises in the state of Minnesota in the basin of southern districts piae trees alone are Lako Lasca and flows into the Gulf plentiful. The chief rivers are the Mississippi, the Yazoo, the Big Black, its chief trib., the longest river in the the Pearl, and the Passagoula. The world (4221 m.), and drains an area climate is nearly subtropical, but of about 1,250,000 sq. m. Its chief tributaries are: on the E., Winconsin, Illinois, Ohio, and Yazoo; and from the W. Minnesota, Des Moines, Missouri, Francis, White, Arkansas, and the Red rivers. It is still important Fork, Columbia R., 90 m. N.W. of commercially, although a good deal of its traffic has been diverted to the railways, and has on its banks many important towns, St. Paul, La Crosse, important towns, St. Paul, La Crosse, Prairic du Chien, Dubuque, Muscatine, Burlington, Quincey, and Hannibal on the upper river, i.e. the M., from the source to the mouth of the Missouri, and St. Louis, Cairo, Memphis, Vicksburg, Natchez, Baton-Rouge, and New Orleans on the main river. river. drawback

occurrence in 1912. when happened great damage was done.

Mississippi Scheme, or Mississippi Bubble, a financial scheme projected by John Law at Paris in 1717 for the colonisation and cultivation of the banks of the Mississippi. Shares were issued which rapidly rose in value owing to the report that there were gold and silver mines in those parts: and the company, which assumed the title of the Compagnie des Indes, undertook the management of the mint and farmed the revenue from must and farmed the revenue from the government, so that not only did the company control practically the whole colonial trade, but it had in its hands the management of the cur-rency and the finance of France. By 1719 shares had risen as high as \$4000, and in 1720 Law made an attempt to amalgamate the company and the Banque Royale. Then camo the crisis, people began to lose con-fidence, and a run was made on the

ndence, and a run was made on the bank, which eventually stopped payment. Law escaped from France in December of the same year.
Missive, in Scots law, denotes documents, the interchange of which between parties is effectual to conclude a binding sale or lease. A M., unless holograph (q.r.), must be witnessed and authenticated as a probative deed: if holograph, the probative deed; if holograph, the acceptor prefixes in his own handwriting a copy of the offer made by the other party. No action can be brought on an unstamped M. Radical defects in a M. acceptance.

Missoula a city of Montana, U.S.A., co. scat of Missoula co., on Clark Fork, Columbia R., 90 m. N.W. of Butte City. It is the seat of the Montana University. Pop. (1910)

12,869.
Missouri, one of the United States, lying midway between the Atlantic and the Rockies. It has an area of 69,415 sq. m. The Mississippi flows along its E. border. E. and W. the state is traversed by the M., into which flow the Grand, Chariton, Osage, and Gasconade. The St. Francis and Big Black are affluents of the Mississippi. Northward of the M. are rolling prairies and forest lands, whilst to the S. is a region of plateau, known as the Ozark Mts., and also much marshy and culti-rated territory. The chief industry is agriculture; in 1912 the maize crop amounted to 243,042,000 bushels, amounted to 243,042,000 pusners, and oats, wheat, potatoes, fruits, and cotton are also grown. Cattle rearing is important; 2,714,000 hogs were raised in 1910. M. is rich in minerals. Coal is produced over an area of 14,000 sq. m., especially in Bates, Lafayette, and Roy counties, and the Latayette, and Roy counties, and the outputs of zino and lead are more than twice as valuable as that of coal. Limestone, Portland cement, hematite, iron, etc., are also produced. St. Louis, the capital (pop. (1910) 687,029), and Kansas City (pop. (1910) 248,381) are the ohief markets for live stock and cercals, while St. Leaguh (2007,1403), 74,030 markets for live stock and cereals, whilst St. Joseph (pop. (1910) 77,403), Springfield (pop. (1910) 35,201), aud Joplin (pop. (1910) 32,073) are other great centres of commerce. There are universities at M., Washington, and St. Louis. Pop. (1910) 3,993,335.

3,993,335.
Missouri ('Big Muddy'), the largest trib. of the Mississippi, being 3047 m. long and 3000 ft. broad at its mouth. Rising among the Rockles in Wyoming and Montana, it passes northward through a wild gorge flanked with precipitous cliffs and known as 'the Gate of the Mountains.' Some 110 m. below this gorge and 40 m. above Fort Benton are the four Great Falls, the grandest of which is a sheer cataract of 87 ft. Missolonghi, or Mesolonghi, a fortified tn. on the Greek coast, in the prov. of Acarnania and Ætolia, situated in a marshy plain, covered with olive plantations, N. of the Gulf of Patras, It is famous for the situated three sieges by the Turks in 1821, 1823, and 1825-26. Lord Byron died here on April 19, 1824, and a monument was erected in his honour.

**Total Cour Great Falls, the grandest of which is a sheer cataract of 87 ft. After receiving the Milk and the Yellowstone (1152 m.) rivers, it flows S.E. through the Dakotas as Kobraska and Kansas on the W. and Iowa and Missouri on the E., and Iowa and Missouri enters its main stream 20 m. above St. Louis. The river is navigable almost to the Great Falls, the grandest of which is a sheer cataract of 87 ft. After receiving the Milk and the Yellowstone (1152 m.) rivers, it flows S.E. through the Dakotas as Kobraska and Kansas on the W. and Iowa and Missouri on the E., and Iowa and Missouri enters its main stream 20 m. above St. Louis. The river is navigable almost to the Great Falls (that is within 2285 m. of the mouth).

Mist, see Fog.

liability to perform his part of it on the ground that he understood its terms in a different sense from that in which any reasonable person would bave understood them. But if a mutual, as distinct from a merely unilateral, M. is proved to the satisfaction of the court, the contract may be set aside. On the other hand, unilateral error will afford ground for rescission if mistaken belief as to the real meaning of the agreement was induced by the conduct, innocent or otherwise, of the other party. If the offer and acceptance essential to the formation of a contract never agreed in terms, there never was a contract at all, not because either party bas made a M., but because there was a want of mutuality. The net result is the same, bowever, as in the case of a genuine mutual M. Mutual error of intention (as distinct from error in expressing that intention. which. though ground for rectification, is not ground for upsetting a contract) practically only arises where parties contract for or about a thing which bas nover had, or has ceased to bave, any existence, or are mistaken as to the identity of the particular thing about which they are contracting, or as to the identity of one another. A M. due to ignorance of a general rule of law, as distinct from ignorance of a particular right, affords no ground for relicf. Where M. does excuse, the remedy of the mistaken where the contract is still executory (q.v.) is to sue for a declaration that the contract be rescinded and any monoy paid undor lt refunded to him. Sometimes, in the caso of unilateral error, the court will decree rectification of the terms instead where the mistaken party is willing to take such relief.

Mistassini, a lake of Quebec, Canada, 120 m. ln length and 20 m. In width. It drains into James Bay by Rupert R. The Little Mistassini lake stretches parallel on the E. side of the greater lake.

Mis Tor. Great and Little, are two hills of Devonshire, England, on Dartmoor forest, 16 m. E.S.E. of Launceston. The former reaches a height of 1767 ft., and the latter 1600 ft.

Mistek, a com. of Austria in oravia, 27 m. S.E. of Troppau. Moravia,

Mistake. As a general rule, one thacew), parasitic on a large variety party to a contract cannot escape of fruit and forest trees, but principally on the apple. It may be easily established on a tree by rubbing on the berries when ripe (at the end of February) upon the under side of young healthy branches. Growth is very slow at first, and male and female shrubs are produced scparately; the former, of course, bear no berries.

Mistletoe Thrusb. THRUSH.

Mistrai,

8 strong, ohilly wind blowing from the N. down the Rhone Valley. 'Le Parlement, le Mistral, et la Durance, sont les trois fléaux de la Provence. Related to the Bora (cf. BOREAS) and Tramontana; all winds blowing from the cold mountain regions N. of the Medi-terranean; often as the rear winds of a cyclone; somewhat like the English north-easterns. Dangcrous to fishermen and destructive to fruit blossom.

Mistral, Frederio (b. 1830), a Provençal poet, son of a farmer in the Bouches dn Rhône. On leaving school, M. tried farming, then law, and finally devoted himsoff to literature. In 1859 he, Roumanille, Mathieu, and others, founded the Félibrige, an association for the cultivation of Provencal literature. Among the most noteworthy of M.'s rustio tragedy; Calendau, a mixture of legend and allegory; his Rhône epic, Lou Pouèmo dou Rouse; and Lou Tresor des Félibrige, a collection of proverbs and foik-jorc. In 1904 M. received one of the Nobel literary awards.

awards.
Mistretta, a tn. of Sicily in the prov. of Messina, 34 m. N.N.E. of Caltanisctta. Pop. 14,000.
Mitau, or Mitava (Lat. Mittavia, Lettish Felgara). the cap. of Courland gov.. W. Russia, on the Aa. 25 m. S.W. of Riga. It was the residence of the Courland dukes in the 16th century. There are tannories, fax and saw mills. and olleloth flax and saw mills, and oilcloth

works, etc. Pop. 35,000.
Mitcham, an ancient Surrey vil., situated on the Wandle. Its principal feature is the common, which has an Market area of some 480 acres. gardoning was formerly the principal local industry, rhubarb, mint, liquo-ico and other medicinal plants being a speciality. It has an excellent golf course and criokot olub, and still

Pop. 8729.

Misterbianco, a com. of Sicily in the prov. of Catania, 44 m. N.W. by W. of tho town of that name. Pop. Misti Mountain, Peru, see El Mistr. Mistletoc, or Fiscum album, a shrubby evergreen (order Loran-Pofession and accepted a place on

the staff of the Nation. In 1848 he and Tear, or Hints for the Overworked issued the first number of the United (4th ed., 1874); Fat and Blood (4th Irishman, and having in its pages ed., 1885). Well known for his adirected his fellow countrymon to rebellion, he was senteneed to transportation for fourteen years. He MITCHELL TREATMENT). bellion, he was senteneed to views portation for fourteen years. He ultimately reached Van Diemen's Land, but in 1853 escaped to the U.S.A., where he was greatly well-comed. Here he pullished the Couler was the seene of a riot was the seene of a zen, etc., but his seeing that he sl

seeing that he sl advocate of slaver, returned to Ireland. He was eleeted member for Tipperary in 1875, declared incligible, and re-elected, but died the same year. He wrote: The Life and Times of Aodh O'Neill, 1846; Jail Journal, or Five Years in Brilish Prisons, 1854: The History of Ireland, from the Treaty of Limerick to the Present Time, 1868.

Mitchell: 1. The cap. of Davison eo. S. Dakota, U.S.A, 65 m. N.W. of Yankton. Dakota University (founded 1888, Methodist Episcopal) is situated here. There are machine and railroad shops, brickyards, etc. Pop. (1910) 6515. 2. A tn. of Perth co., (1910) 6515. 2. A tn. of Perth co., (1910) 6515. The recommendation of the Ellice Is., Pacific Ocean.

Mitchell Mount the history recurs Occan.

Mitchell, Mount, the highest mountain of U.S.A. (6710 ft.) E. of the Rockles. It is in the Black Mts., Yancey co., N. Carolina.
Mitchell, Donald Grant (1822-1908),

au American anthor, born in Connecticut, and graduated at Yale in 1841. He wrote on gardening and agri-culture, and on his travels in Europe and America. He also wrote some literary strains. literary studies, English and American, but his best work, under the pseudonym of Ik Marvel, was contained in Reveries of a Bachelor and Dream Life.

Mitchell, Peter (1821-99), a Canadian statesman, born in Newcastle, New Brunswick, Canada. Called to the bar in 1848. He was appointed senator in 1867, but resigned seven years later. He wrote: A View of President Grant's Recent Message to the View of Canada Recent Message to the

winne, Free Quaker, 1897: The Ad-Principles of E ventures of François, 1899: Dr. North followed by a 2 and his Friends, 1900: Circumstances, 1901: A Comedy of Conscience, 1904: Volume of his Constance Trescott, 1905: A Diplo in 1818 in five volumes. See matic Adventure, 1906: The Red City, Macaulay, Review of Mitford's His-1909. Medical works include: Wear tory of Greece.

me Rulers and the police

large number of small

other food-stuffs. They are conveyed from place to place in the larval stage by attaching themselves to flies. Some M. live entirely in the

to flies. Some M. live entirely in the water, and many are parastic on insects. In the aggregate, they exhibit almost infinite variety of structure. Mitford, Mary Russeli (1787-1855), a novelist, began her literary career by publishing a volume of Miscellaneous Poems at the age of twenty-three. In 1823 Macready produced her tragedy, Julian, at Covent Garden. Of her several plays the best was Rienzi, 1828. In 1819 Miss M. began to print in a forgotten periodical the series of sketches known as Our Vilane. Which deservedly eaught the lage, which deservedly eaught the public faney, and were collected in book form in five volumes between 1820 and 1832. In 1852 she brought out Recollections of a Literary Life, or Books, Places, and People, which contains much interesting autobiographical matter. Mary Russell Milford: Her Life and Friendship, 1913, by W. Roberts, contains much information.

Mitford, William (1744-1827), an English historian, born in London, at Queen's College, Oxford.

v at the Middle Temple. In e published Inquiry into the

Mithras a great Persian dcity, heautiful. It consists of two stiff whom the Zoroastrians conceived of parts united by soft material, so that as a champion of Ahura-Mazda in his eternal combat with Ahriman, the prince of evil. He was early identified with the sun-god, and as such was the centre of a cult, which was introduced to Rome by certain pirates from Cilicia in 68 B.C., and thence spread even to Britain, whither it was doubtless brought by the Roman legion-aries, soldiers being the special devotees of M. The Mithraic rites iucluded an elaborate process of mystical initiation, and a symbolic celebration of Mithra's birth. In the British Museum there is a fine sculpture showing the god as a beautiful youth with a woman's face in the act | of slaving a hull.

Mithridates, more properly Mithra-dates, being derived from Mithras, the suu-god: the name of three kings of Parthia, and several kings of Pontus. The Parthian Mithridates II. defeated a Mongolian invasion, partly conquered Armenia, and was the first Parthian monarch to negotiate with Rome. The greatest of the Pontie line was Mithridates Eupator (c. 132-63 B.C.). His father was murdered 121 B.c., and his mother plotted against her son's life, but he escaped and after some adventurous years regained his kingdom, imprisoned his mother, and began a career of conquest by ravaging Cappadocia and Bithynia. Declaring war against Rome he raised an army of 300,000 men, with a large flect, defeated the Roman forces in Asia Minor, and conquered a large part of Greece (58 B.C.), but was afterwards defeated, and driven back to Pontus. several further years of fighting with varied success, a final victory by Pompey erushed the power of M., who then committed suicide.

Mitla, a vil. of Mexico, 30 m. E. by S. of Oaxaca, containing the romains of some ancient palaces and tombs. Consult Saville, 'Cruciform Structures near Mitla,' in Bulletin of American Museum of Natural History

(vol. xiii.), 1900.

Mito, a tn. of Japan, of the prov. Hitachi, 65 m. N.E. of Tokyo. It has mannifs, of paper, cloth, etc. Pop. 38,000.

Mito, see Mytho.

Mitrailleuse, see Machine Gun.

Mitraria Cocoinea, an overgreen flowering shrub of the order Ges-neraceæ, sometimes grown in cold greenhouses and sheltered borders , and rockeries.

Mitro, the ordinary head-dress of bishops of the Western Church when vested. It exists in many shapes of which it is generally agreed that the later medieval form is the most

they can lie flat on each other when the M. is not in use. It is worn by

bishops, eardinals, and mired abbots.
Mitscherlich, Eilhardt (1794-1863),
born at Neuende, Oldenburg; educated at the gymnasium at Jever;
Heidelberg University; studied philo-Studied chemistry at Gotlogy. tingen, then under Luik in Bcrlin. His work in erystallography led to the theory of isomorphism, com-municated to Berlin Academy (1819), for which he received the gold medal of the Royal Society of London. Published Lehrbuch der Chemie, 1833; also papers to be found in Abhandlungen, Berlin Academy; Poggendorfs Annalen; Annales de Chemie et de Physique.

Mittagong, a tn. of New South Wales, Australia, in Camden eo., 58m. S.W. of Sydney. Coal - mining is

earried on. Pop. 1500.

Mitterburg, see Pisino. Mittimus, in old English law: 1. A precept under the hand and seal of a justice of the peace directed to a gaoler commanding him to receive and safely keep a person charged with an offence named in the M. until ho be delivered in duo course of law. 2. An obsolcte writ calling upon the officer in a county appropriato palatine to command the sheriff to

summon a jury for the trial of a cause Mittweida, a th. of Germany, is Saxony, 12 m. N.E. of Chennitz Manufs, include textile fabrics and earthenware, and there are dyeworks, engineering works, and an electro-technical institute. Pop. 17,795. Mitylene, see LESBOS and MYTILIM.

Mivart, St. George Jackson (1821-1900), a biologist, educated at Kings College, London. Joined the Roman Catholie Church, 1844. Wrote Lessons in Elementary Anatomy, 1873; Com-mon Frog, 1874; elected professor of botany and zoology at Kensington Roman Catholic University College; received degree Ph.D. from the Pope in 1876, and M.D. from University of Louvain, Belgium, 1884; occupied the chair of the philosophy of natural history at Louvain, 1890-93. Just before his death was excommunicated by the Roman Catholie Church. Took part in tho winism and

Genesis of S Apes, 1877; C 1889; Introdi de la Nature, etc.

Mixtees, or Mixtoeas (Fr. Misteques, Mexican mixtua, dweller in the land of clouds), an ancient civilised Indian race who migrated from the N. to S. Mexico, settling in the states of Oajaca, Guerrero, and Puebla, Central America. and peaceably inclined, but brave warriors. Tepascoluta, Yanlıulstlan, and Huajuapan are their chief cities.

They number about 200,000.

Mixtures. If molecules of different kinds, whether elements or compounds, be hrought together with the result that they merely mingle together without losing their identity, then we have what is termed a mechanical M. in contradistinction to the term chemical compound. such a mechanical M. the properties will be intermediate between those of the constituents, while these constituents can always be separated by purely mechanical means, and further the proportions of these constituents can be varied and are not fixed. Thus gunpowder, a dark grey solid, is composed of black charcoal, yellow sulphur, and white nitre, all of which are solid. The M. evidently possesses a colourintermediary between the three given colours, and further it possesses the saline taste of the nitre. By making use of the solvent properties of the constituents, the M. can be separated again into its component parts. Thus, sluce nitro is the only one soluble in water, it can be dissolved away in water, leaving the charcoal and sul-phur behind. Then, since charcoal is soluble in carbon bisulphide, it can be dissolved out in this liquid, leaving the sulphur behind. Besides separation in this manner by solubility differences, other qualities can be made use mathematical constants, facts in geoof in separation. Thus iron can always graphy, etc. Beyond the utilisation
he separated out of a mechanical M. of association of ideas there is no by magnetic means. Again,

liquid M. can be sepa tional distillation (q.v of difference in size of can be separated b filtering.

Miyadzu, Miyazu, or Miyatsu, a fishing tn. of Hondo, Japan, in the prov. of Tango, 50 m. N.W. of Kioto. The celebrated 'Heaven's Bridge 'is here,

of Orenburg, on the R. Meyns, 60 m.

They were agriculturists 100 m. per sec.; period 104 days; ably inclined, but brave distance between, 140×10° m.; united mass 40 times that of sun. (1900-1) gives period, 20.6 days; distance, 28.33×108 m.; mass, 9 times that of sun. Alcor, magnitude 5, is 11 min. distant.

Mizpeh, or Mizpah, the name of several cities mentioned in the O.T. It is thought that the modern towns of Sh'afat, near Jerusalem, and Sût. which is 36 m. from the ancient Heshbon, have grown up on the ruins of former Ms. (1) M. of Benjamin was the scene of the gathering of the Hebrews af'

Benjamites . ministration

Gedaliah's assassination (2 Kings xxv.). (2) Jacob made his peace with Laban (Gen. xxxi.), and Jephtbah took his vow (Judges xi.) at M. of Gilead, and (3) David met the Moabite king at M. of Moab (1 Sam.

xxii.).
Mjosen, or Miosen, the largest lake of Norway, situated in Hamar and Christiania. Its length is 55 m., and the greatest width 12 m.: it covers an

area of 150 sq. m., Mlawa, a tn. in Russian Poland, in the gov. of Plock, 50 m. N.N.E. from the cap. Plock, and its chief manufs. are oil, soap, vinegar, and bricks. Pop. 14,000.

Mnemonics, a method or device constructed to assist the memory in difficult matters, e.g. dates in history, The art was cultivated

by finglified means. Again, of differences in density, gase ong the former (5th and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.), a poet famous for his and light and heavy solids by wash | century E.C.).

ice; this con-s, so to speak. ith objects in then this was 'full' other houses, streets, districts, lind to be associated. The system, so

far as it was popular, relied on the rhetorical art so much cultivated. With the revival of learning, the subwhich is a narrow headland, and regarded as one of the 'three great sights' of Japan. Pop. 10,000.

Miyask, a tn. of Russia, in the gov. A new system sprang up, in which letters of the alphabet were used for figures. The typical instance is the system of Feinagle, published in 1812. of Orenburg, on the R. Meyas, ou M. System of Feinagle, published in 1907. W. of Chelyabinsk. Pop. 16,000. Mizar (§ Urse Maj.), determined telescopically as double by Riccioli letters, s, i, n, m, r, l, d, k, b, p. These are chosen specially, e.g. m=3

regular intervals of about 52 days double dark lines in spectrum; deduced primary to be two stars, equal magnitudes, revolving in orbit turned edgeways to earth; relative velocity, which has the further advantage of

ing words, particularly with some ingenious or humorous association, Dr. aids Edw . the rives Ratica system that has had some vogue. Numbers may similarly be represented by sentences, each word containing the corresponding number of letters. The device of rhyming is used e.g. for the genders of Latin nouns: in weather lore, 'evening red, and morning grey, two sure signs of onc referring to the Latin tag, used for remembering syllogisms in logic, beginning Barbara celarent ' (Jevons), or to the popular devices such as tying a knot in a hand-No system of M. has atkerchief. tained success, unless perhaps in the case of the laborious inventor. may make temporary use of some device, but to carry a system in the head is to double the burden. history of the subject, see Von Aretin, System. Anleitung z. Theorie und Prax.

der Mnemonik, 1810.
Mnemosyne, the Greek goddess of memory, the daughter of Heaven and Earth (Calus and Terra) and the mother of the Nino Muses by Zous.

Moa, a native name for members of the extinct genus (Dinornis) of flightless birds of New Zealand. D. giganteus stood from 10 to 12 ft. high and had its legs enormously developed and was probably capable of running at great speed; the head was very small. Other species inwas very small. Other species included D. strulhioides, about the size of an average estrich, and D. didiformis, which was only about 4 ft. tall. They apparently existed in considerable numbers, and their com-plete extinction is believed to have been of very recent date. The genus was closely related to the genus Eppornis, of which huge remains arc found in Madagascar.

Moab, a territory to the S. of Israel, occupying the high plateau to the E. of the Dead Sea.

Moabites, the inhabitants of the state of Moab, once a powerful enemy of the kingdom of Israel. The M. were closely connected with the Hebrews, and the Moabite language is a dialect of the northern tongue. Some account of the history of Moab is given in the biblical narrative (Exodus, Numbers, etc.). In the reign of David, Moab became subject The Moabite deity was Chemosh.

Monbite Stone, one of the most im-

being associated with poor memory. century B.C., to commemorate his Naturally the mere exercise of select-successes against the Israclites. The upper portion of it was discovered in 1868 by F. A. Klein at Dibon, and since that date sufficient has been recovered to make a reconstruction possible. For a translation of this, see 'Moab,' Hastings' Dictionary of the Bible.

Moallakat, a collection of seven Arabic poems, so called, according to popular tradition, because they were suspended by the Arabs in the Knaba at Mecca. Sec Theodor Nöldeke's article in the Encyclopædia

Britannica, and an English verse translation by W. S. Blunt (1904). Moawiya (661-680), see Caliph. Moberly, a city of Missouri, U.S.A., in Randolph co., 59 m. N.W. of Jefferson City. There are lumber and flour mills and foundries.

(1910) 10,923

Mobile, a city and port, co. seat of Mobile co., Alabama, U.S.A., on Mobile Bay. Since 1908 ships draw ing 24 ft. have been able to go up beyond the city, and this accounts for the large maritimetrade. Bananas. ores etc., are the staple imports, whilst raw cotton, timber, lumber, cereals, cattle, and oil are freely exported. Pop. (1910) 51,521.

Mobiller, Crédit, CREDIT

MOBILIER.

Mobilisation, the setting in motion of the standing army. It consists in carrying out all the necessary arrangements for putting the army on a war footing. As rapidity in striking the first blow may be of vital importance, a complete scheme of M ready prepared; all orders warrants, stores, etc., arc kep! ready for immediate issue, so that the mere order to mobilise is sufficient. Each unit is inspected fully, and the numbers of reservists required 'called While these are assembling at up.' or other regimental depôt, assigned place, outfit and equipment for war are drawn from stores. Re-servists are then equipped and join their unit. M. should be as rapid as possible and not occupy a week. To facilitate rapidity, private itrus are under contract for transport and rapid supply of food, clothing, etc. an important matter being the supply of horses. In addition, railway facilities and shipping accommodation, proviously arranged in the scheme, are secured. While the scheme, are secured. While the army about to take the field is thus being prepared, men and corps are called into existence to till the vacancles duo to their doparture ortant monuments of Semitic and recruiting is pushed forward, and quity, was creeted by Mesha, King of training carried out for future con-Moah, about the middle of the 9th tinuous supply for active service.

equipment of hospitals.

Moccasin, the shoe of the American Indian. Originally, an ingenious covering for the foot made all in one piece of untauned skin. Its advantage for the hunter or scout The form and style is obvious. differed with different tribes and individual fancy; it has given place largely to similar articles made in leather and in several pieces.

Moccasin Snake (Ancistrodon contortrix), or Copper Head, a poisonous brown snake, with black and brown markings, growing to about 3 ft. in length. It is found in N. America, where it inhabits marshy districts, feeding on other reptiles, birds, and

small mammals.

Mocha, or Mokha, a fort. seaport and tn., the former cap. of Yemen, Arabia, on the Red Sea, 55 m. N.W. of the Strait of Bab-el-Mandeb. It was formerly important for its trade in coffee, most of which now passes through Hodelda. Pop. 5000.

Mocha, or Mecca. Stones, are agates which the colours are due to thle impurities. The M. stones or visible impurities. The M. stones or moss agates are filled with brown moss-like or dendritle markings distributed throughout the mass. are obtained chiefly in Arabia, and

are used as brooch stones.

Mock Heroic Poetry. From very carly times hurlesque has been a The popular form of literature. Batrachomyomachia was even attributed to Homer himself, and many ancient authors besido Aristophanes delighted in bandling trivial themes with mock solemnity. Among the moderns, the absurdities of medieval romanticists provoked in retort romanticists provoked in retort Don Quixote in prose, and in verse Dulci's Morgante Maggiore (1481), retort and Folando's Orlandino (1526), beside other burlesques. Among the best mock-heroics in English are: Chaucer's Sir Thopas, Butler's Hudi-bras, Pope's Rape of the Lock; the Rehearsal and Critic also contain good specimens.

Mocking-bird, the popular name of a number of birds, with exceptional powers of mimiery, but particularly of Mimus polyglottus, an American bird, alied to the thrusbes, which it resembles. It imitates a great

variety of bird songs.

Mock Orange, Philadelphus or coronarius, a hardy shrnb (order Saxifragacce) with large creamy-white flowers, possessing a fragrance rather like that of orange blossoms.

Orders and contracts are issued for Added luminous circles, concentric, supplementary stores. Special attention is paid to medical stores and the some complete, others represented by arcs only; they often have straight lines or bands of light, sometimes forming a cross. They are very varied and often fantastic. theory, see HALO.

Mocorito, a tn. in Sinaloa state, 60 m. N.N.W. of Culican. Pop. 10,000.

Moctezuma, a tn. in the state of Sonora, Mexico, 100 m. N.E. of Hermosillo. Pop. 9000.

Mod, a Gaclic word said to be derived from the Norse, and equivalent to the A.S. moot (as moot hill, a place of meeting). It was loold times specially connected with the holding of justiciary courts. The name has heen revived by an association called An Commun Gaidhealach, formed about twenty years ago to promote the study of the Gaelic language. A M., similar literature, and music. A M., similar to the Welsh Eisteddfod, is held every autumn at somo place in Scotland, and prizes are awarded for Gaelic compositions, both literary and musical, recitation, singing, and playing. Highlanders are keen on the preservation of their language and traditions. They have the great advantage of possessing the Bible in Gaelic; also several publications are issued wholly or partly in that lanisside Wholf of party in that anguage, including An Deo Graine ('The Sunbeam'); a Catholic magazine, Guth na Bliadna ('Voice of the Year');

and a weekly papor called the Alba.

Modder River, a l. h. trib. of the
Vaal, Orange Free State, S. Africa.
It is 186 m. long, and flows into the
Vaal some 30 m. above that river's
confinence with the Orange R.

Mode, in musio, the grouping of intervals within the space of an ootave, and is known also as ootave Various Ms. are in scale, or specio, use in different parts of the world; e.g. Hindu musio divides an ootave into seven intervals, or twenty-two part-intervals; and Mohammedan musio divides an octave into seventeen part-intervals, from which it derives nearly twenty different Ms. of seven primary intervals, which differ according to the relative position of the short steps. The Ms. familiar to Western civilisation are derived from the Greek and ecclesiastio diatonio Ms. (see HARMONY); they are therefore known as diatonic, respectively major and minor, and are in theory the most correct (see HARMONICS). In the major diatonic M., the octave has its semitone-intervals between the third and fourth, Mock Suns and Moons, or Parhelia and between the seventh and eighth; and Paraselenæ, a development of the other intervals being whole tones; halosofthe sun and moon respectively. In the minor, the semitone-intervals

are between the second and third, and between the fifth and sixth. Some modern composers, chiefly and Russian, use a 'tonal' mode, consisting of six whole tones.

Modelling, the art of making repre-'sentations of things in wax, clay, stone, cardboard, etc, more particu-larly applied to the making of a sculptor's model. This is the original design from which the actual sculpture is made. Potter's clay, mixed with finely powdered sandstone to make it work easily, is the material Models of various kinds are used for an infinite variety of purposes, educational not less than artistic. Medalists make use of a model from which the head or figure is cut in the die. These models are modelled in wax on a piece of slate.

Models, Architectural, reproduc-tions on a small scale of the whole or part of a projected building, showing its final form. They are valuable as conveying a clearer idea to an inexperienced person than any number of drawings would do. They are also useful in particularly complicated buildings to show the workmen concerned exactly how certain things

must be done.

Modena: 1. (Ancient Mutina.) A prov. of Italy, in Emilia. Area 1002 sq. m. Pop. (1911) 353,051. 2. The cap. of the above, situated hetween the Panaro and Secchia, 23 m. N.W. of Bologna. The chief objects of interest arc the Romanesque cathedral of St. Geminianus, dating hack to the 11th century; the ducal palace; the Albergo Artl, with its priceless library, the Biblioteca Estense, and picture the Biblioteca Estense, and picture gallery, including works of many of the great Italian masters; and the university, founded in 1678. The chief manufs, are silk, lats, glass, and leather. From 1238 the town was under the rule of the family of Este. Its dukes were expelled in 1860, when Modena was incorporated in the kingdom of Italy. Pop. (com.) 70,923. Modena (or Mutina), Tommaso Bari-

sini da, also known as Tommaso da Rabisino (fl. 14th century), apainter of Modena. Nothing is known of his life. His chief works are a 'Madonna' in the chapel of the Castle at Karlstein; another in the gallery at Modena; and a 'Madonna with Saints' in the

Belvedere, Vienna.

Medestinus, Herennius, a famous Roman jurist, a pupil of Ulpian, and one of the councillors of the Emperor Alexander Severus (c. 210). In the Digests of the Justinian Codo he is classed as one of the highest legal authorities, and a large number of his dicta are cited.

W.S.W. of Syracuse. Oll, wine, and Modiea, a

grain are the chief products. Pon. 50,000.

Modillien, in architecture, a French word of Latin derivation, signifying the large ohlong projections bearing a leaf or scroll on their under side which are arranged heneath the cornice in Corinthian entablature. fine example is found in the Cheragie monument of Lysicrates, Athens,

Modjeska, Helena (1844-1909), Polish actress, was the daughter of a musician, Michael Opido. She first made a reputation for herself in Cracow, and afterwards in Warsaw where she played leading rôles from 1868-76. In the latter year she sailed for California with her second husband, Count Chlapowski. Their attempt to live on a ranoh falled, and Madame M. returned to the stage, making a sensation at San Francisco with Adrienne Lecouvreur. She was famous for her highly emotional interpretations of Ophelia, Desdemona, Juliet. Beatrice, and other Shakespearian heroines, and acted also in the plays of de Musset, Sardou, Dumas, and Schiller.

Modeos, a N. American tribe of a warlike and aggressive nature, for-merly dwelling on the extreme N.E. frontler of California. Originally they formed one tribe with their northern neighbours, the Klamath, and on seceding from this tribe, established themselves on Lost R. Most of them perished in the revolt of 1873, and some of the survivors were transported to the Nuapaw reservation in Indian territory, though a few, numbering about 225, wore returned to the Klamath reservation, Oregon. Modulation, in music, signifies a change of tonality or key, and is in one of three classes, diatonic (natural), 'ehromatic,' or 'enharmonic' (both artificial). On an ordinary keyboard instrument, Ms. are formed one tribe with their northern

ary keyboard instrument, Ms. are effected only by means of 'tempera' ment' (n.v.), or approximation of tones in tuning. The term is also used to express graduation as regards

quantity of sound. Modulus, in physics, a constant quantity depending on the properties of matter, whea these properties are expressed by means of mathe-matical equations. The chief meduli occur in questions of clasticity. Thus when an clastic string is stretched Hooke's law states that the strain produced is preportional to the ex-tending force. Now if a constant k is Introduced which converts this state ment into an equality, k is called a modulus of elasticity. Expressed symbolically, if T=extending force in lbs. per square inch, l=the normal length of the string, and n =extended length, then $T = k \frac{n-1}{l}$. Clearly then,

the tension in the string when extended to twice its normal length; k in this case of simple extension is called Young's modulus. A body subjected to a force may be altered in shape or in size, or may be altered in both shape and size. When the force merely produces a change in volume the equation stress= $k \times \text{strain}$ is still true, and in this case k is called the modulus of bulk. If the force, or stress as it is most frequently called, produces a change of shape, then k is called the modulus of rigidity. The term modulus has some significance in mathematics. In the theory and practice of logarithms it is the number by which the logarithm of a number to a given base is multiplied in order to convert it into its logarithm to a different base. The symbol | \(\sqrt{16} \) means +4, and shows the value of the magnitude without regard to sign. This symbol is terrued modulus.

Modum, a tn. in Norway, 25 m. W. of Christiania, with cobalt mines. Pop. 9000.

UU. **-- .T==== Tmanhaalrican (1979-81), 8. Moe es sant

or Christiania, and became a clergyman in 1853. He ultimately was appointed bishop of Christiansand (1875), where he died. Moe's first publication was Samling of Same Followies on Steri Norske .

er, folk-son in collaboration with Asbjörnsen, he published Norwegian folk-tales, Norske Folke Eventyr. As a poet, Moe is best known by his At Haenge paa Juletract, His Samlede Skrifter appeared in 2 vols. (1877).

Mochringia, a genus of perennial plants (order Caryophyllaceæ) now

incorporated in the genus Arenaria. Moelan, a com., Finistère dept., France, 7 m. S.W. of Quimpelc. Pop. 6320.

Moen, a small chalk island on Zealand Is., Denmark, 20 m. long, with an area of 86 sq. m. Its chief town is Stege. Pop. 14,000. a small chalk island off

Moerberke, a tn. in the prov. of E. Flanders, Belgium, 12 m. N.E. of Ghent. Pop. 6000.

Mœris Lake, 35 m. long and 41 m. broad, situated in the prov. of Fayum, Central Egypt. It is now known as Birket-el-Karun.

Moeritherium, an extinct animal found in the Middle Eocene beds of Egypt, not larger than a tapir, and undoubtedly the earlie

undototedly the caric
covered of the probose
mammals. This, with
discovered in Egypt, affords a nost
important link between existing elephants, which some authorities regard
in importance to the city of Morocco.

if $l^1=2l$ then T=k, thus k is equal to a properly belonging to a distinct order, and other ungulates. The apparent absence of the link for some time puzzled palmontologists. Withont the intermediate links, too, the relationship of the M. to existing elephants would hardly be realised. There was no lengthening of the chin. and the muzzle may be assumed to have been of normal proportions. The six pairs of cheek teeth were all in use at once, and the series of teeth in the front was comparatively full. second pair of incisors in each jaw exhibit an enlargement which is obviously a stage from which the four tusked Mastodons (Tetrabelodon), with a snout-like muzzle instead of a trunk, evolved.

Moero, or Mweru, Lake, 76 m. long and 25 m. broad, was discovered by David Livingstone in 1867, and Sharpe further explored it in 1890; it lies 90 m. S.W. of Lake Tan-ganyika in Central Africa.

ganyika in Central Altree.

Mosia, an ancient Roman prov.
occupying the territory S. of the
Danube, and corresponding to Bulgaria and Servia. It was first inhabited by Thracians, then by Celts. and was conquered by the Romans in 29 B.C. The Emperor Domitian divided it into two provinces, Mæsia Superior and Mesia Inferior.

Moso-Goths, the name given to certain Goths who settled in Lower Mosia, at the mouth of the Danube, in the 3rd and 5th centuries. were converted to Christlanity by Ulfilas, who translated the Bible for

them.

Moffat, a police burgh, burgh of barony (1635), and par. of Dumfries-shire, Scotland, on the Annan, 20 m. N.E. of Dumfries. It is noted as a

health resort. Pop. (1911) 2702. Moffat, Robert (1795-1883), one of the pioneers of missionary work in Africa, and father-in-law of David Livingstone, was a native of Had-diagtonshire. In 1814 he offered his services to the London Missionary Society, and in 1816 he was sent out to S. Africa, where he worked with great success in Namaqua Land, converting the chief, Afrikaner. Afterwards, having married (1819), he and his wife spent nearly fifty years Griquas mainly among the Bechuanas. His Missionary Labours and Scenes in South Africa is a most interesting book. He died near interesting book. He died near Tunbridge Wells. Mofussil, an Indian name for certain

Bengalesc districts having their own justice), from which peal to the higher

Mogila, Peter (c. 1596 - 1647), a Russian prelato, belonging to a Wal-lachian family of rank. He was a metropolitan of Kiev from 1632 until his death. He drew up a Catechism (1645), and the famous Confession of Faith of the Orthodor Greek Church in the East (1643), accepted by the synod of Jerusalem in 1672.

Moglley, or Mohiley: 1. A gov. of European Russia, in the div. of W. Russia, bounded N. by Vitebsk, E. and S. by Smolonsk and Tchernigov, and W. by Minsk. The chief river is the Dnieper, which enters M. in the N.E., runs W. as far as Orscha, and then flows S. to its junction with the then flows S. to its junction with the Beresina. The principal occupations are agriculture and cattle breeding. Corn, rye, barley, and oats are grown. The chief towns are Mogilev, Chausy, Orscha, ctc. Area 18,700 sq. m. Pop. 2,214,900. 2. The cap. of the above gov., stands on the Dnieper, 120 m. S.W. of Smolensk. It has a cathedral founded in 1780. There are tannerles and ironware factorics. Pop. 53,000.

Mogliano, a com. in the prov. of Treviso, Italy, 7 m. S. of the tn. of Troviso. Pop. 7600.

Mogok, the chief vil. of the Ruby Mines dist. in Upper Burma, 70 m. N.N.E. of Mandalay. Pop. 8000. Moguer, an old Mogrish city and

port in the prov. of Huelva, Spaln, on the Rio Tinto. Brandy and wine

are produced. Pop. 8500.

Mogui, Moghal, or Mughal, the Arabio and Persian forms of Mongol, is usually applied to the Mohammedan empire in India, founded by Baber, a descendant of Tamerlane, in The emperors of Dchi wero usnally styled 'the Great Moguls. Their rule came to an end after tho Indian Mutiny in 1858, the last of tho line dying in imprisonment at Rangoon in 1862.

Mohaes, a tn. in the prov. of Baranyn, Hungary, on the Danube, 25 m. E.S.E. of Fünf Kirchen. Pop. 16,000.

Mohair, see Wook

Mohammed, or Mahomet (properly Muhammad, 'the praised' or 'the desired'), also Mohammad (c. 571-632; 12 Rabia, A.H. 11), the founder of Mohammedanism, or the faith of Islam. He named his religious system Islam or Hanif, apparently devoted. His father, Abdallab, came of good Arab stock, and wns a member of the tribo of Koreish. M. was a posthumous child, and his mother only lived ill his sevonth year; on her death his grandfather, Abd-ai-Muttalib, took charge of him, and on his death at the end of only

Its exports inclinde gums, wool, olive one year, he was adopted by his oil, and skins. Pop. 2±,000. | uncle, Abu Talib. The child was an epileptic, and was of a melancholy, thoughtful disposition. Most of his early life was passed in tending flocks of sheep and herds of camels: he had little or no education, and as a lnd could neither write nor read. His grandfather had been a man of considerable standing, and had taken charge of the Temple and the Holy Well in Mccca, so that the boy must have seen and known many pilgrims and holy people. His nucle was a poor man, and until twenty-six years of age M. worked hard for his living like any other young Arab. In his 26th year a wealthy widow, named Kbadija, fell in love with him and married hlm; she was fifteen years older than M., and appears to have older than M., and appears to have been a woman of great good sense and patience, with a heart-whole belief in her young husband that materially heiped him in his subsequent career. As a young man he naturally worshipped at the Kaaba, the great sanctuary of Mecca, originally a local sanctuary of the Koreish tribe. The Kaaba of the Koreish tribe. The Kaaba continued the image of Hobal, their tribal god, also several other delties belonging to other tribes, and more sacred than all, it held the famous 'black stone' of Mecca (q.v.), 6 to 7 in. square, built into the walls of the Kaaba, traditionally held to be a stone from Paradisa brought down a stone from Paradise brought down by the angel Gabriel. battle took place when he was quito a young man, in a blood-fend between his tribe and the tribe of Hawazin, in which be dld not distinguish himself or show any of his later military spirit. After his marriage with Khadija ho seems to have been a partner in a produce-shop. During 35th year the Kanba bis wrecked by a great storm. No person could be found who would venture to replace the secred stone in the wrecked shrine, and it was finally decided that the first man who entered the court by chance should be the chosen one. To M. should be the closer one. To M. fell the honour. All his life the prophet had been interested in theology, and he had been slowly forming his new belief in one God, but as yet he had not proclaimed ininself a prophet. His first reventions came to him in a caye in intlons camo to lilm in a cave in Mount Hira, where he had retired with his wife for meditation. Here he appears to have had visions and religious cestasics. Kladija, at first alarmed about his health, inter, when he declared the ungel Gabriel had appeared and spoken with him, at once hellered him to be a wache. at once believed him to be a prophet. Ho now put his new doctrine into the

more frequent, and during his trances uttered messages which were carefully remembered and written down. They varied in subject, from history and magic to religious teaching, and formed the beginning of the Koran (q.v.). His friends were aware that as a boy be was subject to fits, but they believed these later seizures to be inspirations from God. His attltude to Jews and Christians at this period was friendly and conciliatory. The first religious meetings were held on Mount Safa, where M. boldly proclaimed himself to be the prophet of Arabia. From here he preached his doctrine to the people of Mecca, denouncing idolatry, preaching beaven and hell, and declaring Allah to be the only God.

declaring Alian to be the only god.
His followers were named Muslim
(Moslems), which, as apparently
meaning 'traltor,' 'surrenderers,'
remains difficult to understand.
The fury of the tribe of Koreish, who
had charge of the holy shrine, merely
added energy and fervour to his
preachings, and he threatened the
non-helievers with awful tortures in had charge of the holy shrine, merely added energy and fervour to his preachings, and he threatened the non-believers with awful tortures in hell, and perfifed Mecca with his furious eloquence. He established himself in the house of a rich convert in the centre of the town, and held frequent meetings. The Moslems now began to be crucilly spersecuted by the Meccans, and the prophet was blockaded in his own thouse, for though persons might be starved to death, no blood must be shed in the sacred city. After a revelation that the goddesses of died in Medina. The traditional shed in the sacred city. After a revelation that the goddesses of Mecca existed as well as Allab, the siege was raised, but once free M. asserted that the revelation came from the Dovil, and the trouble was renewed. Khadija died about this time, and also Abu Talib, and bis strongest influence for good and his protectors were thus removed. The prophet was forced to fiee from the wrath of the Meccans to Yathrib, afterwards called Medina. This is afterwards called Medina. the Hijra (Hegira), Sept. 22, 622 A.D., from which Moslem chronology dates as A.H. 1. M. bound his followers to himself by the strongest ties, and caused both belpers and soldowers to intermarry. He contracted several marriages himself, one wife being Ayesha, aged 9, to infant daughter of Abu Bekr.

The arrangement of the several marriages himself, one wife being Ayesha, aged 9, to infant daughter of Abu Bekr.

The arrangement of the several marriages himself, are several marriages and in the several marriages are more and the several marriages and in the several marriages are more and the several marriages and in the several marriages are more and the several marriages and in the several marriages and in the several marriages and in the several marriages in the several ma

famous formula, 'There is no God but ceremonial washing, praying five God, and Mohammed is the apostle of times a day with the face turned God.' For the first few years bis towards Mecca, abstinence from the God, and Monammed is the aposite of the first few years bis towards Mccen, abstinence from the faithful wife, his friend Abu Bekr, and his adopted slave Zald, worked in secret, converting only a few. directed to Jerusalem, until the Meanwhile the revelations became prophet found that no compromise could be made with the Jows. He also established the call to prayers. maezzin, and Friday as the sacred day of the week. He enforced the fast of Ramadan, a period when no food may be caten from sunrise to sunset. The prophet next began his series of campaigns, the first successfully directed against the Mecan caravans. The second resulted in the victors of Rada (2004). In Manuschet. tory of Badr (629 A.D.). The prophet's plundering expeditions added great wealth to Medina, while his army rapidly grew strong, and in A.H. 8 (630 A.D.) he marched on Mecca with 10,000 well-disciplined men, easily conquering the most sacred city of Arabia. The next year the great Moslems, and very quickly Mecca itself was a Moslem town. M. no longer showed meroy; all un-believers were to be slain, his soldiers became fierce religious zcalots, who died cheerfully for the falth and the promise of Paradisc held out by the prophet. The conquest of Mecca

died in Medina. The traditional appearance of M. scems to have been that of a middle-sized, beavilybuilt man with a large head and big thick hands and feet, with long hair and dense beard; his eyes were said to be tinged with red. He left no son to succeed him. After his death the sayings of his revelations were collected, and being bound together formed the Koran. These sayings were scratched on bones, written on palm leaves, and some on parchment, and there could at the time be no proof that some were not spurious. M. had given his world a new religion, and a new code of laws, many of which he was the first to violate, though always infant daughter of Abu Bekr. the effect of his teaching and its. The first Mobammedan mosque far-reaching influence, see Mohamwas bull at Medina, and an arranged MEDANISM, and for the succession code of laws established, dealing with lafter his death see CALIPHATE; see

also Shutes and Sunnites. orities: A. Sprenger, Das Leben und orilies; A. Sprenger, Das Leven una die Lehre des Mohammad, 1861-65; Sir W. Muir, Life of Mahomet, 1856-61 (4 vols., and abridgment, 1 vol.); D. S. Margoliouth, Mohammed and the Rise of Islam, 1905; Syed Ameer Ali. The Spirit of Islam, 1896.

Mohammed II. (1430-81), Sultan of Trailer, called the Congregor's new

Turkey, called 'the Conqueror,' sneceeded his father, Amurath II., in 1451. Taking Constantinople in 1453, he next fortified the Dardanelles, eongnered Greece and most of the Balkan territories, while at sea he became the terror of Sonthern Enrope. He died

in an expedition against Persia.

Mohammed V. (b. 1844), the present Sultan of Turkey. When the Turkish Revolution occurred in 1909 at the instigation of the 'Young Turks' committee, the army nnder Shovket Pasha (assassinated 1913) took possession of Constantinople. deposed and exiled the Sultan Abdul Hamid, and replaced him by his brother, Mohammed Reshid.

Mohammedanism, thofalth of Islam, Mohammedanism, tho falth of Islam, the religion preached by the propilet Mohammed. The sacred book of the faith is the Koran, compiled after the death of the propint, who, as far as we know, wrote nothing himself. The original creed was founded on Mohammed's belief in the cape God a loving Eather who makes may be an unbeliever lie must be damned for ever. The teaching of the fulth about women is a grave wrong in so great a faith; it destroys at once the sanctity of marriage and burled there; the place has since of motherhood and the parity of the man's home. Mohammed lifted Arabia from its ignorant worship of degraded gods, and he enforced strict laws of named Zayn-el-Abidin, and through prayer, abstinence from wine, fasting, and cleanliness. The Koran embraces the whole teaching of Islam; the four principal laws regarding the individual are: first, worship, i.e. prayers to Allah five times a day, preferably in a mosque, but other-wise with the face turned to Mecca; secondly, fasting during the month of Ramadan from snurise to sunset, including abstinence from smoking as well as food and drink (this month may occur at any season of the year, as the ecremonial year depends on the seasons); thirdly, pligrinunge, to Egypt and Moslem Asia united and travel once at least during a lifetime placed—their capital at Bagdad.

Auth- to Mecca, and perhaps once to an und Medina; fourth, the giving of alms for the support of the faithful poor. Women are not compelled strictly to observe these laws; those who can are naturally expected to fulfil their duty, but fasts and pilgrimages are not asked of thom unless health and eireumstances make it possible. Women pray in the mosques apart from the men, closely veiled as the Mohammedan law compels, but they may not lead the prayer, nor is it considered desirable that they should often offer public prayer. Beside the Koran three other books contain foundations of the faith of Islam. The Sunnat, or traditional law, The Ijma, and The Kias. These four romprise the whole religion of the Moslem. The fact of the prophet being in possession of Mecca, the Arabian sanctuary, and the promise of a paradise which fulfilled all the material desires of the Arab, aided largely to increase the mass of con-The prophet left no son, and verts. after his death Abu Bokr succeeded as caliph (successor), or religious head, of the Mohammedan empire. Each succeeding caliph was to be n direct lineal descendant of the prophet (see Califul). In 654 the third caliph was murdered, and Ali-cousin of Mohammed, and husband of founded on Mohammed's belief in the cousin of Mohammed, and husband or one God, a loving Father who rules Fatima, the prophet's daughter, the universe with merey; later, succeeded as religious head of the God was transformed into a hard, unforgiving despot who demanded the eternal destruction of all unbeliovers. The erecd is simple, the Shittes; the former refused There is no God but God, and Mohammed is the apostle of God.' However vilo be a Mohammedan he as usurpers, and Ali as the divine can be saved, and however excellent may be an unbeliever he must be lies son, took his nuclee and was his son, took his place and was poisoned by his wife, then Hosdo, his youngest brother, succeeded him, and ho was slain at Kerbela and bccome a second Mecea to the Only Shiites. 0110 of Hosain's massacre. survivod thc children him the Orthodox Mussulman Church claims the divine succession. enams the divine succession. The Shiltes flourish chiefly in Persia. The Sunnites and the Shiltes are often opposed to one another, both in points of law and in the sanettly of their leaders. At the death of the prophet, the Mohammedan cutpire consisted of Arabia Guly, but close on a hundred years afterwards to feither ruled from the Indust to the faithful ruled from the Indus to the Pyrenees, compelling all subjects to accept the falth or die. The grandfather of Charlemagne finally

The Turks (Asiatic people from band who infested London about Turkestan) formed the bodyguard 1711 and 1712. Their practice was of the caliphs of Bagdad, and to parade the streets of London at becoming stronger than their leaders, conquered Asia Minor in 1299; it was then the title of sultan ('victorious') hecamo used. The Turks invaded Europe, 1355, and seized Constantionals, which her would be the sultantionals. Constantinople, which has remained their capital until to-day. Through tho 11th and 12th centuries the Mohammedaus gradually spread into India and crossed the Punjab into India and crossed the Punjab into the Deccan, where the prophet's creed remains one of the principal faitbs of that part of the country to-day. From this brief survey it can be seen how far and wide the teaching of the prophet bas been carried; it has borne its fierce followers to win empires, but has not taught them to govern them. The consensus of Western opiuon is that the laws of this great faith militate the laws of this great faith militate against progress, and destroy the main road to real civilisation; recognises slavery, and degrades its mothers and daughters, but there is much simple truth and wonderful strength in the creed.

Mohammera, Mohammerah, Muhamrah, a tn. in the prov. Khuzistan, Persia, between the Euphrates (Shat-el-Arab) and Karun rivs. It exports wheat, wool, horses, and opium. The town has increased in importance since the opening of the Karun Canal in 1889. Pop. 10,000. Moharek, a tn. on a small island of

tho Bahrcin group, a Brilish posses-sion, Persian Guif, off the N. coast of Samak Is. Pop. 25,000. Moharram, the first month of the

Mohammedan year, which, consisting of twelve lunar months, only contains 354 days, to which, in what are called intercalary years, one more is added. Thus their New Year's Day falls continually eleven days carlier than in the preceding year.

Mohave, an American tribe of the Yuman linguistic stock. They inhabit both sides of the Lower and Middle Colorado R., and number 4000.

Mohave Desert, an elevated sandy plateau in San Bernardino co., California, U.S.A.

Mohawk, a trib. of the Hudson R. in New York, U.S.A.; it riscs in the eo. of Oneida, and joins the Hudson a few

miles above Troy. Length, 160 m. Mohawks, a tribe of American Indians which belonged to the Con-Their federacy of the Five Nations. territory reached from the St. Lawrence down to the Oats Rills. After expedition into the Norwegian Sea in the War of Independence they removed to Canada, where they were assigned a location on the Grand R. notic and They number about 1600.

Mohawks, or Mobocks, a lawless cüge der

night, and under cover of the dark-ness to commit many outrages upon harmless eitizens.

Mohicans (Wolf Indians), a branch of the Algouquin stock, who originally inhabited the Hud-on Valley, hut were driven eastward by the Mohawks. They sided with the colonists during the revolutionary war, and

are now practically extinct. Mohl, Hugo von (1805-72), a Gorman botanist, brother of Julius von Mohl, was born at Stuttgart In Würtemberg. He studied at Tübingen, where he became professor ot ootany (1835). His principal work is Grundzüge der Anatomie und Physiologie der Vegetablishen Zelle, 1851.

Mohl, Julius von (1800-76),German Orientalist, born at Stuttgart in Würtemberg. He was profersor literature of Oriental at Tübingen (1826-33), but lived Paris, where he became professor of Persian at the Collège do Franco. He edited Firdau-l's Shāh Nāmeh (1838-68), and made a French translation, published posthinnously; Le Lirre des Pois traduit et commenté, 1876-78. His wife published somo of his papers inder tho title Vinntsept. Ans. d'Histoire des Etudes Orientales (2 vols.), 1879-80. Mrs. Simpson's Letters and Recollec-

tions of Julius and Mary M., 1887. Möhler, Johann Adam (1796-1838), German Roman Catholic theologian, horn at Ingersheim in Würtemberg. He received priest's orders in 1819, and began to lecture on ecclesiastical law and history at Tübingen in 1823. Five years later he was appointed professor ordinary of theology, and in 1835 he removed to the University of Munich. He principally remembered as the antbor of Symbolik. antbor of Symbolik. His miscellaneous works were edited by Dr. Döllinger (2 vols.), 1839-40. Life by Wörner, 1866.

Mohmand, a powerful Patban tribo inhabiting the wild mountainous dist.

of the N.W. frontier prov. Once
hostile, they are now busily engaged
in trade in the Peshawar valley.

Mohn, Henrik (b. 1834), a Norwegiau meteorologist, born at Bergen.
He was educated at Christiania Unisersity, where he became director of

versity, where he became director of the meteorological institute (1866). He was in command of a scientific 1882. II

North Polar Expedition of 1893-96)

(vol. vi.), 1905. Mohun, Charles, fifth Baron (c.1675-1712), son of the fourth Lord M. by Lady Philippa Annesley, daughter of the first Earl Anglesey. A notorious duellist of so violent a temperament that he was twice charged with murder but was acquitted each time. His last duel was with the Duke of Hamilton over a quarrel regarding the estates bequeathed to the duke by Charles, second Earl of Macelesfield Both combatants lost their lives, M. by the hand of his adversary and the duke by the treathery of M.'s second, General Macartney. Having no issue the barony expired with his death. See Burko's Extinct Baronetcies.

(Persian muhr, Mohur seal ring), a gold eoin, originally Persian, used in India from the 16th century. It is now the official name of the chief gold coin of British India, welghing 180 grs. troy, and contain-ing 165 grs. of pure gold. Its value Its value is about 15 silver rupees (\$7.21, 36.73 francs). The Bengal mohur is worth about 33s. (42.32 francs).

Moidore, Moyodore, Moedor, Lisbonine, a former gold coin of Portugal (moeda d'ouro, gold coin) worth 4800 reis; current in England in the early 18th century. Later it was the name used for 27s., its approximate value.

Moir, David Macbeth (1798-1851), Scottish physician and writer. He early contributed to Constable's and Blackwood's magazines, often under the pseudonym of \(\Delta \). His works include, besides poems, the Autobiography of Mansie Wauch, 1828 (new ed., 1895), and Outlines of the Ancient History of Medicine, 1831.

Moiræ, or Parcæ, Greek names r the three goddesses of Fate, by he represented Hesiod tho as daughters of Nox and Erebus. Clotho, the youngest, presides over mortals at the moment of their birth. She is represented with a distaff in her hand, and is robed liko in varicgated raiment. Lachesis Lachesis is bespangled with stars, and always holds a spindle, to spin the thread of life and plot futurity. Atropos, the eldest and most inexorable of all, is garbed in black, and is continually employed in cutting short the thread of man's existence, irrespective of age, quality, or sex. Some poets spoke of them as all-powerful even over Zeus.

Moire (Fr. moire, watered silk), now used exclusively to denote watered or clouded silk, though the actual process of calendering can be applied to any material, whether woollen and silk stuffs or linen. For-

of Scientific Results of the Norwegian merly the term was interchangeable with mohair, a fine watered dress material made from the white silky hair of the Angora goat ('mohair' from Arabie moukhayar). The calendering process, whatever the particular particular fabrio used, consists in wetting and folding it in a particular manner and then subjecting it to hydraulic pressure of about 100 tons between oylinders or rollers. This removes the nap, makes the material smooth. even, and glossy, and imparts to it a beautiful and permanent wayy appearance.

Mols, a name given by the Annamites to the uncivilised peoples dwolling in the Inde-Chinese mountains. They are called 'Khâs' by the Siamese and 'Penongs' by the Cambodians. They are a very short race, gentle, and rather timid. They carry on agriculture by primitlyo methods, can work iron, and weave silk, cotton, and threads.

Moisie, a riv. (250 m. long) in Saguenay eo., Quebec, Canada, runs S., entering the Gulf of St. Lawrence about 66° W. long.

Moissac, a tn. in the depart, of Tarn-et-Garonne, France, on the Tarn, 15 m. W.N.W. of Montauban. Pop. 8200.

Moissan, Honri (1852-1907), a

(1852-1907), a French chemist, born at Paris. He became a doctor of science in 1885, professor of toxicology at the Ecole de Pharmacie in 1886, and professor at the Sorbonno in 1900. Ho is celebrated for his valuable experiments with fluerine, being the first to isolate and liquory same. Ho also made some interesting experiments in diamonds. facturing the wise simplifi

acetylene gas silicides, and tions include

Reproduction du diamant; Carbure de Calcium ; Le Four électrique ; and artleles on manganese, iron, ohromo,

Moitte, Joan Guillaume (c. 1746-1810), a French sculptor. His statue of the 'Sacrificateur' won his electien to the Academic des Beaux-Arts (1783). He executed the fine Arts (1783). He executed the fino bas-relief of the front of the Panthéon, 'La France entourée des Vertus . . ,' a bas-relief for the Luxembourg vestibule, and a bronze equestrian statue of Benaparte. See Quatremèro de Quiney's 'Elogo' in the Moniteur, 1810.

Moji, a scaport tn. of Japan, on Klushlu Is., facing Shlmonoscki. Has coal mines. Pop. 55,682.

Mojos, Mohos, or Moxos, a tribo of S. American Indians who dwell about the Mamoré and the upper reaches of

the Madeira R. in Northern Bolivia. They were once cannibalistic, polyand indifferent gamous, to the both of child life sanctity marriage. They number about 30,000.

Mokaddasi, Shams ed - Din (Mukaddasi, from Jerusalem) (b. 946 A.D.), an Arab (Mohammedan) geo-He travelled widely, and grapher. wrote an account of various countries under Moslem rule. See 'Descriptio Imperii Moslemici' (Do Goeje's cd. in Bibl. Geog. Arab., iii., 1877); in Bibl. Geog. Arab., iii., 1877); Syria and Palestine (Le Strange's ed., Palestine Pilgrins' Text Society, iii., See also Kremer, Kulturgeschichte des Orients, ü., 1877; Le Strange, Palestine under Moslems,

1890. Mokanna, Al (the veiled one), see

AL-HARIM-IBN-OTTO.

Mokha, see Mocha. Mokpo, a treaty port near the S.W.

extremity of Korea, opened in 1897. Moksha, a riv. of Russia, flowing through the govs. of Ponza and Tambov, a l. b. trib. of the Oka. Length 350 m.

Mokshani, or Mokshansk, a tn. in the gov. of Penza, Central Russia, on the Moksha R. It has rope, on the Moksha R. It has rope, potash, and woollen industries. Pop.

10,000.

Mola, Giambattista (1620-61), a painter and etcher of Italian origin, born at Besançon. He excelled as a landscape painter, and had a bold and vigorous style. His etchings include : Judith with the Head of Holofernes 'Atalanta,' etc., and he painted 'A Landscape with the History of Hagar and Ishmael.' See Lanzi, History of Painting in Italy.

Mola, Pierrefrancesco (c. 1620-66), an Italian painter, born at Coldre, Italy. He studied under Francesco Albani at Rome, and then went to Venice for a time. He excelled chiefly as a landscapo painter, but also painted several historical pictures. Among his masterpieces are: 'St. John in the Desert,' 'History of Joseph,' 'Hero and Leander,' Dido,' Landscape with the Temptation of

Mola di Bari, a seaport of Italy on the Adriatic, 12 m. S.E. of Bari. Its chief products are oil, grain, and wine. Pop. 15,000. Mola di Gaeta, original name of

Formia (q.v.).

Molasses, or Treacle, a by-product of sugar manufacture. Molasses from cane sugar is utilised as human food, molasses from beet sugar is bitter and unpleasantly flavoured, though much is used in Germany for mixing with dry food for live stock as a substitute In France molasses is emfor roots. ployed in the production of alcohol.

Molassians, see EPIRUS.

Molbech, Christian (1783-1857), a Danish philologist, historian, bibliographer, born at Sorö. He was professor of history and literature at the Copenhagen University (1823-43).

He published the literary journal Athene (1814-17) and edited the Nordisk Tidskrift (1840). His chief works are: Historie om Dithmarskevr Works are: Alstorie on Dulmarsker Krigen, 1813; Kong Erik Plogpen-nings Historie, 1821; Dansk Ordbog, 1833; Dansk Dialekt-Lexikon, 1833-41; Danish Glossary, 1857, 1866; Idea of a Scandinavian Union, 1857.

See Erslew, Forfatter-Lexicon.
Molbech, Christian Knud Frederik
(1821-88), a Danish poet and playwright, son of the preceding, born at Copenhagen. His chief poems are: Digininger, 1845; Fra Danäidernes Kar, 1873; and Efterladte Digte, 1888. Among his plays Ambrosius (1878) and Dante are the best. also produced an excellent transla-

tion of the Divina Commedia. Mold, a market tn. of Flintshire, Walcs. 12 m. S.W. of Chester, with limestone quarries and coal and lead

mines near.

Moldau, a riv. of Bohemia, Austria, rises in the Böhmerwald Mts., flows past Prague, and after a course of 270 m., joins the Elbe near Melnik.

the N.E. portion Moldavia, the N.E. portion Roumania, formerly one of nf Danubian principalities. Sec Rov-

MANIA. Mole, or Talpa europæa, a common British burrowing mammal, about 6 in. in length, with a cylindrical body, long pointed muzzle, short tail, broad powerful five-clawed forc limbs, and long, narrow hind limbs. The fur is soft and velvety, and normally greyish black, but frequently of other Although one of the Incolours. sectivora, the M.'s food is chicfly earth worms, but insects are eaten in large numbers, and recently collected evidence goes to show that a proportion of vegetation forms part of the dietary. Ms. are very voracious, and are unable to livo more than a few hours without food. The nest, with its system of galleries and approaches, is a wonderful work; it is made usually under banks or among the roots of trees. The M. hills are formed as the animal excavates, and on lawns and pastures they cause inconvenienco. disfigurement andbut the soil is always rich, for the animal avoids poor land where food is likely to be scarce. Ms. are usually caught by means of spring traps or by nooses fixed on bent twigs and placed in the runs.

Molé, Mathieu (1584-1656), a noted French magistrate. He became attorney-general in 1614, and was appointed by Richelieu first president of the Parlement (1641-53), becoming keeper of the Great Scal (1651). His *Mémoires* were published by the Société de l'Histoire de France (1855). Sec Vic by Molé (1809), De Barante (1859): De Pansey, Eloge, 1775.

Mole, St. Nicholas, a coast tn. of aiti, on the N.W. peninsula. Haiti, Columbus landed here in 1492.

Molech, or Moloch, originally Melek was intentionally pointed in the Hebrew ou the analogy of 'Cosheth' in order to discredit it. The title is found widely spread throughout the Semitic races as a divine uame, but in the O.T. especially connected with the religion of Ammon, e.g. 1 Kings xii. 7, 'the abomination of the children of Ammon.' The evidence, indeed, seems to show that Molceh, or Milcoin (1 Kings xi. 5: 2 Kings xxiii. 13, etc.), was the special tribal god of the Ammonites, standing to them in the same relation as did Chemosh to the Moabites. The particular rite connected with his worship was the sacrifice of children by fire, and it is certain that this practice, though vigorously opposed by the prophets, was also introduced into the worship of Jehovah during the last period of the kingdom (Is. lvii. 5; Jer. xix. 5). Solomon is said to have built a sanetuary to Molech at Topheth.

Mole Cricket, an orthopterous in-sect, highly cluborated for a burrowsee in the ground where, like the mole, it lives on worms and insects. It is from 1½ in. to 2 in. long, dark brown, and covered with soft hair. The tibiæ of the forelegs are flattened legs of the mole. The M. C. r power of flight, though it c above ground at night. The

white, and mature very slowly. Molecule, denotes in chemistry the smallest particle of a substanco exhibiting the chemical properties of the substance; any further division completely alters its properties, so that It becomes another substance or sub-stances. Ms. arcultra-microscopic and Indirect investigated by tho methods of physics and chemistry. It was the study of gases in which Ms. are most free to move that gave rise to the molecular theory. The physical

of gases the laws of Ms.

to "11 mees are Boyle's,

tion of gases. It is in chemistry where success has been most attained. Analysis determines the clements of which any substance is composed and which must be present in the M. All Ms. are found to be similarly constituted, and the proportions of elements are generally easily deter-Thus the chemical formula for acctic acid is C2H4O2, since the hydrogen can be removed or replaced in one, two, or three portions, in various reactions; similarly the oxygon in one or two; and the carbon divisible by two. The M., therefore, is truly represented by the formula or some multiple of it. The chemist may then proceed by actual weights, and assign proportional molecular weights to substances. These determinations depend on the law of Avogadro that coual volumes of gases contain an oqual number of Ms. an hypothesis steadily confirmed in the kinetic theory. The chemist adopts tho simple formula, or the sumplest multiple which allows his reactions. In a very large number of cases, the methods of physics corroborate tho simple chemical formula. The volume which 1.g. of a true gas of molecular weight 1 would occupy under p mm. pressure of mercury and to C. temperature is represented by the 22.33×760/p×(273+t)/273 formula litres, according to the laws of Boyle and Charles. If the chemist has determined the molecular weight m of a gas, m grams should occupy this volume, and this is found to be true within the limits of error of experi-The tibize of the forelegs are nattened meut. So lat the case of liquids, other and terminated much like the fore- gases. In the case of liquids, other legs of the mole. The M. C. r render the method of uncertain. Yan t'Hon t Avogadro's law may

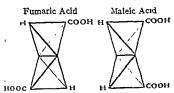
be applied to substances in dilute solution; results may thus be obtained from consideration of osmotic pressure, and its effect on vapour pressure, boiling and freezing point of the solvent. Very little progress has, however, been made in the case of liquids and solids; in the latter caso we can hardly be sure of molecular structure, except when solid is fused, volatilised, or dissolved. A further study by chemists reveals

the structure or architecture of the M. itself. Groups of the constituents d Avogadro's of Ms. may be removed, and tend to Based or ture of those ture of those 'I. Substances

its united to forces acting form Ms. of unierent substances, yet in the same propertion, the Ms. not The further only presenting different properties nature of Ms. but splitting into different groups of proceeds in general in the direction of atoms in the course of chemical rediffusion, viscosity, and internal fried actions. This, with the aid of the

Van t' Hoff examined these structures and propounded geometrical theories. For example, fumaric and maleic acid are both represented by—

Wislicenus explains this difference in properties by geometrical formula thus-



The actual size of a molecule is of no not mailly in India, A Pockel-Book of interest beside its physical structure Engineering Formulæ, and treatises and chemical properties. It was in on economic subjects.

Molesworth, Sir William (1810-55),

cut-flower nurseries surround

town. Pop. 64,000.

Mole-rat (Spalax or Aspalax, genus of rodent quadrupeds of the family Muridæ, having teeth almost like those of rats, but in many retailed the second of the company of the company retails the company retail genus of rodent quadrupeds of the family Muridæ, having teeth almost like those of rats, but in many respects resembling moles. One species, inhahits the S. of Russia. Another, found in the Malayan Archipelago, is Pop. 42,000.

Moliètta, a seaport of Italy, in the prov. of Pari It has a cathodral, and like those of rats, but in many respects have a cathodral and almonds are exported. Pop. 42,000.

Moliètta, a seaport of Italy, in the prov. of Pari It has a cathodral, and like have a cathodral and like have a cathodral and almonds are exported. Pop. 42,000.

theory of Valency (q,v), enables him to picture the probable architecture of the Ms. These and allied cases occur under the form of Isomerism, Polymerism, and Metamerism (q,v). For example, the M for caffeine is represented thus: of physiology successively at Zürich, Turin, and Rome. In metaphysics, he denied any vital principle, regarded life as metabolism between the organic and inorganic worlds, and enclosed his materialism in the formula Without matter no force; without force no matter. His views were developed in Kreislauf des Lebens, 1852. his numerous scientific treatises was a Natural History of Man and Animals, 1855.

Molesey, East and West, two adjacent pars in the co. of Surrey, on the r. b. of the Thames. United population (1911) 6500.

Moleskin, a kind of silk fabric having a thick soft shag similar to the fur of a mole; also a kind of shaggy cotton fabric which is used for workmen's trousers by reason of its good wearing qualities.

Molesworth, Mrs. (Mary Louisa Stewart) (b. 1839), a Scottish novelist, horn in Rotterdam. Under the pseu-donym of 'Ennis Graham' sho wrote donym of Emnis Graham's ho wrote She was Young and He was Old, and Cicely, and other of her novels were Hathercourt Rectory, and Neighbours. Among her numerous pleasant and pure - minded children's stories are Carrots, Cuckoo Clock, The House that Grew, and The Grim House. She has also retold the lives of the saints for the rough. the young.

Molesworth, Sir Guilford Lindsay (b. 1828), an English engineer, horn at Milhrook, Hants. After various

vestigated by Lord Kelvin who expressed it by stating that if a drop of water were magnified to the size of the earth, its Ms. would be somewhere in size between that of a small shot and a cricket ball.

Molesworth, Sir William (1810-50), an English politician, horn in London. He entered parliament in 1832. Extended the state of the most prominent 'philosophic Molenbeck-Saint-Jean, a tn. of radicals.' For many years he control of the most prominent 'philosophic and the West Market and the West Market and the West Market M Molenbeek-Saint-Jean, a tn. of radicals.' For many years he con-Brahant, Belgium, forming a N.W. trolled the Westminster Review with suburh of Brussels. Its chief indus-tries are carpets, margarine, soap, than any other who exposed the evils and textiles. Market-gardens

Moleschott, Jakob (1822-93), a sumed by Jean-Baptiste Poquelin, the Dutch physiologist and metaphysi-greatest comic dramatist of France, clan, horn at Bois-le-Duc. After He was born in Paris, the son of a

rich upholsterer, who was also valet de I not only the manager of the troupe, His father gave him presumptivo. the education of a gentleman, first at the Collège de Clermont, where he was the school-fellow of the Prince de Conti. and then, as one of a group of gentlomen's sons, he followed a course of instruction under the celebrated philosopher and astronomer. Gas-From 1645-47 he studied law at the University of Orléans. But the career of lawyer was not con-genial to Jean Poquelin, while the theatrc attracted him irresistibly. As a Parisian he must often have witnessed the popular burlesques and



MOLIÈRE

farces of Turlupin, Gros-Guillaume, Gaultier-Garguille, the Goguelins, the Tabarins, and the Rodomonts on the Pont Nouf, in the Place Dauphine. and at the fairs, as well as the farces -which had begun to be much more popular than pastorals and tragedies -performed at the Hotol do Bourgogne. For people had come to wish to be made to laugh for their money and Corncille was losing power. Poquelin got together a little troupe, founded the Illustre Théaire, and took the name of Mallère. After a few power. months of struggle and want in Paris, the company ended in bankruptcy. Undaunted, M. and his troupo left Paris for the provinces, and for tho next tweive or thirteen years they went from town to town playing. M.

chambre du roi, avec survivance—thus and an actor, but the adapter of the M. was born king's valet de chambre plays they represented and, soon, an author himself. At first he wrote farces after the orthodox Italian type, with its stock characters. these he afterwards re-cast and doveloped into real comedies as, for instance, Le Fagotier, which became Le Médecin Malgré Lui, Georgibus dans le Sac, which became Les Fourberies de Scapin, and La Jalousie de Barbouillé, the later Georges Dandin. Two works of comedy proper mark this period, L'Elourdi and Le Dépit amoureuse. With the help of a reputation won in the provinces, and the patronage of the Prince de Conti, who introduced him through Monsieur, tho king's brother, to the king and queen, M. launohed his troupo in Paris under the title 'Troupo do Monsieur.' As pièce de début beforo the Parislan public he gavo Les Précieuses Ridicules, 1659, the first satiro on French cultivated society, or, more strictly, on would-be cultivated society, especially as seen in the provinces. Its truthfulness to life, its galety and good humour secured for M. the public favour for ever. Comedy after comedy followed with remarkable rapidity for thirteen years. Mendeavoured to bring comedy up to the standard of tragedy, even to surpass it if possible, but he was obliged for financial reasons to provide also conventional and oxtravagant farces and—to satisfy the taste of the court comedies or -operatic ballets, such as Les Facheuse, in which the words are only a protext for music and dancing. Spanarelle, a tragicomedy, was produced in 1660; Dom Garcie de Navarre, an unsuccessful tragedy, in 1661; L'Ecole des Maris and Les Fâcheuse, both highly successfui, also in 1661. L'Ecole des Femmes, In which, as in L'Ecole des Maris, M. shows what happens when people's natural tendoncies are ignored, was a brilliant success, but it brought upon its author these jealousies and bitter nttacks which were to pursue him to tho end of his life. These attacks he roplied to (1663) in the mordant Critique de l'Ecole des Femmes aud L'Impromptu de Versailles. In 1664 Force, Mariage La Princess d'Elide, and the first three acts of Tarluffe were performed. Tartuffe was an attack upon hypocrisy religion, as it may come to flourish in the house of a bourgeois devot. But nnd r 7728 more

vailed upon Louis XIV. to suppress it. M.'s onemics redoubled their attacks. led a very strenuous life, for he was! Only after five years was the whole

play authorised and played with extraordinary success (1669). Don Juan (1665) was another play in which hypocrisy was attacked; in L'Amour Médecin, Le Médecin Malgré Lui, and Le Malade Imaginaire, the doctors of the day are pilloried and quackery oxposed; sincerity and coquetry come to close quarters in Le Misanthrope; the mortifications of the man who marries into a superior social rank are depicted in Georges Dandin; L'Avare shows that distrust comes to be the essential characteristic of the miser, and the immortal Bourgeois Gentilhomme makes fun of the bour-geois who would quit his native sphere and become a gentilhomme. The man M. was kind, gentle, affectionate, and magnanimous, beloved of his troupe, very charitable, and always ready to help others. If, at times, he became bitter and irritable, it was only when he was smarting under the cruel attacks of his enemies and feeling at the same time the pressure of his most strenuous life. He married Armande Béjart, a comédienne of his troupe and a coquette; with her he led a very unhappy domestic life. M.'s art marked an epoch in the development of the French drama: lt brought about a new dramatic ideal. ideal hero ' of classic tragedy gave place in M.'s comedies to the real man with all his foibles and his duality of oharaoter—'On peut être intelligent en son entendement et sot en son caractère.' M. shows the man in his surroundings, not more or less detached from them as was the elassic 'hero,' and thus incidentally throws a clear light on the whole group to which he belongs. His chief aim seems to have been to amuse by depieting things as they actually were, in strict truthfulness to life. Whether he had the deliherate moral aim to cure men of their folbles and The many vices is a moot point. The many opinions expressed by M. which seem to show that he had this aim should, according to M. Faguet, be looked upon as constituting his apologia rather than his set purpose. There is little room for sympathy in the amusement ovoked by M.'s characters, the laughter they cause is the critical laughter of the intelligence — Gallic laughter, that of M. Bergson's hook on the subject. 'Leur rire est un jugement' may be said of M.'s audience—a point in which it differs from that of Shakespeare. See hiographies by Moland (Paris) 1886, (Paris, 1886), Mesnard (Paris, 1886), Mesnar

Molina, Luis (1535-1600), a noted Spanish Jesuit, born at Cuenca, in New Castile. He entered the Jesuit order at an early age, and for some time taught theology at the College of Coimbra in Portugal. Later, he was appointed professor of theology at Evora in Portugal, and remained here twenty years, then returning to Spain. Shortly before his death he was appointed professor of theology His chief work is his Con-Madrid. cordia Liberi Arbitrii cum Graliæ Donis, published 1599. He also wrote eommentaries on the first part of the Summa of Aguinas, and De Justitia et Jure. M.'s doetrine is an attempt to reconcile the free will of man with predestination, and is still taught in the Jesuit schools.

Moline, a city of Rock Is. co., Illinois, U.S.A., on the Mississippi R., 4 m. from Davenport, Iowa, on the opposite bank. There are ironfoundries, steel-works, mills, machine shops, and manufs. of ploughs, pumps, scales, wagons, etc. (1910) 24,199.

Molinia, a gonus of grasses common on damp moors. The long stiff stems of M. cærnlea are gathered and sold for eleaning tobaceo pipes. A varle-gated form is grown in the garden as an edging plant.

Molinier, Guillem, a poet and prose writer of the 14th century. He took a prominent part in the foundation and administration of the Literary Academy of the Gaya Sciense at Toulouse in 1324, and was nominated chancellor. He wrote a treatise en-titled Las Leys d'Amors, invaluable as a guido to young poots and for the knowledge of troubadour poetry contained therein. This work was published by Gatien-Arnoult in 1841-43, and translated by D'Aguilar and D'Eseoulonhre.

Molinos, Miguel de (1640-96), a Spanish mystic and ascetic, horn of noble parents in Pataeina, Aragon. He was ordained priest, and went to Rome in 1669, where he hecame acquainted with many distinguished people. In 1675 he published his people. Spiritual Guide, an ascetical treatise which roused the antagonism of the Jesuits. It was finally condemned by the Inquisition, and M. was sentenced to life imprisonment. See Bigclow,

Molinos the Quietist, 1882.
Molique, Wilhelm Bernhard (1802-69), a German violinist and composer,

used for one of the higher order of Turkish judges, who expounds both civil and criminal law and the re-ligion of the state. Beneath him is the 'cadi' who administers the law.

Mollendo, a port of Arequipa, Peru, and lies to the S.W. of Lake Titicaca. Its chief exports are sheep, gold, silver, copper, ruhher, vicuña weol, and ceco leaves. Pop. 6500.

Möller, Peter Ludwig (1814-65), a

Danish poet and critic, horn at Aalborg. He wrote, Lyric Poems, 1840; Lövfald (The Fall of the Leaves), 1855, and the critical work entitled Det nyere Lystspil i Frankrig

og Danmark, 1858. Möller, Paul Martin (1794-1838), a Danish author, born near Veile. He visited China as a ship's chaplain (1819), during the voyage writing his poem, Glæde over Danmark. In 1826 he became professor of philosophy at Christiania, professor oxtraordinary at Copenhagen (1830). His works include the romance, Students Eventyr, and En Dansk the play,

students Eventyr, and the play, Eyvind Skaldasniller. His Efterlade Skrifter appeared in 1839-43. See also Collected Works, edited by Olsen (1855-8) by Market 1855-80. (1865-6), by Andersen (1896). Consult Paul Martin Möller, by Rönning (1893), Andersen (1894).

remoto period in majority live ln

at the lowest de, shallow water, and many above low-two tide mark. A considerable proper-Dibi tion inhabit rivers and lakes, and very large numbers have adapted them-selves to a terrestrial life, some even contriving to exist in deserts, though most terrestrial M. aro very dependent on moisture. The diet is much varied; carnivorous M. preychiefly upon other members of the class. Many feed exclusively on minuto lowly organisms, and others are entirely vegetarian.

A few M. have long been valued as food, or as bait for other animals, some yield dyes, and others secrete pearls and pearly shells which have been and are employed for great been and are employed for great diversity of ornament. The modern systematic arrangement of M. is in five classes, as follows: Class 1, Amphineura, comprises two orders, Polyplacophora, which includes the cont-of-mail shells, or sea woodlied (Chiton). These differ in many respects from other M., having points in common with crustageans and erder, Aplacophora, includes a few deposit their ova in capsules (e.g.

in theology and law, and to other worm-like creatures which, instead of prominent personuges. It is especially a sholl, bear on the dorsal surface a sholl, bear on the dorsal surface minute calcareous spines. Class 2, Gastropeda, is divided into sections, Stroptoneura, the members of which are bisexual, furnished with a shell and generally with an operculum; the other section, Euthyneura, are hermaphrodite M., and scarcely any of them have an operculum in the adult state. The first section contains two orders, Scutlbranchia, of which the limpots, topshells and ear-shells are typical, and Pestinihranehia, typified by rock sentis, wholes, i hepotothe conforters on Grand poetwers, or, The first ender (Op a Laboratelia) of the other cartion aro all marine, c.g. hubble shells, sea hairs, and umbrella shells. The second order (Pulmonata) comprises the true snalls, and slugs, and the false limpets. Class 3, Scaphopoda, includes only the tooth shells (Dentaliidæ) which are a very distinct group of sand burrowers, with shelly tubes resembling those constructed by some marine worms. Class 4, Lamcllibranchia, comprises the bivalves. All the members of this class have no head, nor cephalic eyes, nor jaws or tongue, like other M. All are aquatic and most of them marine. They are classified in four orders: (1) Protobranchia (e.g. Nucula), (2) Fili-Molluscs (Mollusca) constituto one branchia (e.g. common mussel, pearl of the chief divisions of the animal oyster, scallops), (3) Eulamellikingdom, and were evolved at a very branchia (e.g. freshwater mussel,

Tetra branchla orders, Of the former, Dibranchla. pearly nautilus is the solitary living example, but with it have been classifled all the oldest fossil forms. Nautilus itself has been found in the oldest Paleozolo formations. differs from all other Cephalopods in having four Instead of two gills, and a number of small retractile feelers instead of eight or ten arms with suckers or hooks. Among these, com-prising the order Dibranchia, are the octopus, the argunut, squids, and cuttle-fish. In all cases, M. reproduce by means of eggs, but in the freshwater snails (Vlvipura) and other instances, the young are hatched within the parent's oviduet. Some blvalves produce eggs in enormous numbers, e.g. the common syster, a Amphineura, comprises two orders, annihers, e.g. the common dyster, to Polyphacophora, which includes the million or more, and the American coat-of-mail shells, or sea woodlied (Chiton). These differ in many Terrestrial M., on the other hand, despects from other hi, having points posit very few eggs, and these are in common with crustaceans and cannellds, but after investigation of their life history, there is no doubt as skin, and in a few are protected by a to their association with M. The other in hardened calcarcous shell. Many M. arguerings includes a few deposit, their area in capsules (e.g.

common whelk), others produce them sailors for the small albatross of the in spiral ribbon-like structures. The ova of most M. develop into free-swimming larve (Veliger), but in a few cases there is no metamorphosis. Wenice. He was professor of Italian No M. has an Internal bony skeloton, literature in his native town. Among but in most of them the external shell, which is secreted by the mantle or outer covering, affords adequal publica Veneda, 1896, second edition, or outer covering, affords adequal or outer covering, affords adeque protection. In the shell, a variety of structures and arra: ment occurs, but it is of minor imlaglia di Lepanto, 1899; Studi e
portance to systematic zoologists Richerche di storia e d'arte, 1892;
compared with the structural features Venezia, 1897; La Vie privée à
of the animal. The shell may be Venize depuis l'origine 1894 la
single as in the limpet and snail, or be
chute de la République, 1895-96. formed of two valves as in the mussel or oyster, or it may consist of a series of plates as in the Chitons. In the squid it is quite internal, and in a number of instances it is altogether absent. The foot is a modification of the ventral surface, and in the Cephalopods part of it is elaborated into the so-called arms, the other part forming a funnel through which water is ejected to causo the animal to move in the opposite direction. In the cockles it is evolved for leaping, in the limpet for clinging, in the razor shells for burrowing, and in the pond snails for swimming. The operculum is the flat hard structure with which the snail closes its shell. It also is subject to much elaboration. odontophore or radula, which occurs in all M., except the Lamellihranchs, is a remarkable structure; its upper surface is covered with spiny out-growths, and with this the limpet rasps the rocks for food, and carnivorous M. penetrate the shells of other From completo absence ln some species to the wonderful eye of the cuttles, organs of vision are to be found in all stages of development. A sens

smell. more

many M., a desert snail in the British Museum was found to be alive after having been fixed to a tablet for four years, where, of course, it could not obtain food or water.

Mollwitz, a vil. of Silesia, Prussia, 3 m. W. of Brieg. Frederick the Great routed the Austrians here in 1741.

Molly Maguires, the name of a Ribbon society which flourished in Ircland between 1835 and 1855, and harassed the landlords and their sup-

Venezia, e la bat-

Moloch, see Molech.
Moloch Horridus, or Thorn Dovil, a
small Australian lizard about 8 in.
long, bearing large spines on all parts
of its body, giving it a most ferocious

appearance.

Mologa: 1. A trib. of the Volga, which winds in a north and afterwhich which is a north and afterwards south-easterly direction for some 340 m., through the governments of Tver, Novgorod, and Jaroslav, It connects the Volga and the Neva. 2. A tn. near the confluence of the Mologa with the Volga, in the gov. of Jaroslav, Russia. Pop. less than 7000.

Molokia one of the Harrian

Molokai, one of the Hawaiian (Sandwich) Is., Pacific Ocean, between Oahu and Maui. There is a loper settlement on the N. coast. M. was the scene of Father Damien's work, Area 281 sq. m. Pop. 2500.

Molong, a tn. of Ashburnham co., New South Wales, 150 m. W.N.W. of Sydney, possessing conner and silver.

Sydney, possessing copper and silver

mines.

Molopo, a river of S. Africa, and trib. of the Orange R., flows through Bechuanaland, and divides the British orown colony from protectorate.

Molteno, a tn. of Albert co., Cape of Good Hope. It has a station on the lino connecting E, Londou with Aliwal

N. Pop. less than 2750.

Molteno, Sir John Charles (1814-86). a S. African statesman, of Milancso extraction, born in London. In 1831 he sailed for S. Africa. In 1854 he became first member for Beaufort in the legislative assembly, and in 1872 was appointed first Cape Premier. In 1878 he retired from public life, being opposed in every respect to Sir Bartlo Fere's policy. He received the decoration of K.C.M.G. in recog-

ampaign as adviser

1849. Took an important part in the conduct of operations in the Danish War (1864) and in the subsequent peace negotiations. Sent to Florence in Feb. 1866 to negotiate an alliance in Feb. 1866 to negotiate an alliance with Italy against Austria. In the ensuing war with Austria he again displayed astounding precision and rapidity in formulating the general plan of campaign. With the Prussian king defeated the Austrians at Sadowa (1866). His foresight had much to do with the success of Germany in the Frauco-German War of 1871, the details of the plan of campaign being prepared by him as early as the winter of 1867. He concentrated his armies on Metz with centrated his armies on Metz with extreme caution, and in less than three weeks actually reached the walls of Paris. On his return to Prussia M. was created field-marsbal. In 1873 M., with Baryatinski and the emperors of Germany and Russia, signed a treaty with Russia, a treaty signed a treaty with Russia, a treaty ominous of the growing importance of Germany in the constellation of Powers. M. published many works, among which were: The Italian Campaign of 1859; The Franco-German War, 1872; and The German Army, 1871. Died at Berlin. Moluceas, or Spice Islands, several

groups of islands of the Malay Archi-pelago, lying between New Guinea and the Celebes, belonging to the Duteb. They include Teraato and Halmahera; Buru and Ceram (in the Amboyna group); tho Banda Is.; Timor-Laut, Larat, and other of the Timor-Laut, Larae, and south-eastern islands; and the Bachian, Obi, Kei, Aru, Babar, Leti, Water groups. The M. are the and Wetar groups. The M. are mountainous and volcanic, and tho soil is very fertile, the chief products are of commerce being all kinds of spices. of conflicted being an Anna sago, rice, and coffee. The climate is fairly bealtby, though hot and moist. Amboyna is the chief tn. and most important commercial centre. Their total area is estimated at 43,864 sq. m., whilst the inhabitants, mainly Polynesians, Papuans, and Malayans, are

estimated at 430,000.

Moluccolla, a genus of hardy and half-hardy annuals (order Labiato), with flowers in willow phonis at lorde

Molucca b Molybde weight 95

metal, oe denile, Mo denum, which resembles graphito in dicularly to AB, then the moment of appearance, but which can be distributed from it by the green tinge is equal to twice the area of the lead molybdate, and in a rare form as

to the Turkish commander-in-chief, important of the three oxides of molyb-Became chief of the general staff in denum. The metal is obtained by denum. The motal is obtained by heating the oxide with charcoal, or in a current of hydrogen. Molyb-denite when roasted oxidises to form the oxide, which is soluble in ammonia, forming ammonium molyb-date, which is a delicato test for phosphoric acid.

Molyneux, sec CLUTHA, Molyneux, William (1656-98), an Irish mathematician and philosophical writer, born in Dublin. A fellow of the Royal Society, and at one time president of the Dublin Philosophical Society, he was returned to the Irish parliament in 1692, and created a stirby his plea for the legislative inde-pendence of his country in *The Case* for Ireland (1698). He wrote the first English treatise on opties, Dioptrica Nova (1692), a subject suggested, per-haps, by his wife's tragic loss of sight.

Molza, Francesco Maria (1489-1544), an Italian poet, born at Modena. There he married, but most afformation of his years were spent free from domestic ties at Rome and at Bologna, amid a brilliant and admiring literary band. His Ninfa Tiberina has been described as a classical mosale, but most glowing pastoral mosale, but most of his poetry seems but a frigid, if finished, paraphrase of Greek and

Latin verse.

Mombasa, or Mombaz, a scaport and eblef tn. of the British East Africa Protectorate on the E. coast of Mombasa Is. It has a fine harbour, and is connected by rail with Uganda and with Lake Magadi (opened in 1913). It is an important com-

mercial centre. Pop. 30,000.

Mombo, a locality some 50 m.
N.N.E. of Bulawayo, S. Rhodesia. It is noted for ruins of areincological interest.

Momein, or Tong-yuah-ting, a tn. of Tün-nan, Cblna, 135 m, E.N.E. of Bhamo (Burma). Has important cattle markets. Pop. (estimated) 6000.

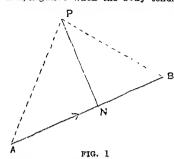
Moments. The moment of a force

about a given point is the product of the force and perpendicular drawn from the given point upen the line of action of the force. It is clear that the moment is zero when either the force is zero or its line of action passes through the given nted

ngle. AB and

which it gives to the Bunsen flame. triangle PAB. From considerations It also occurs in wulfcnite, PbMoO4, or of such areas, it may be easily deduced that the algobraical sum of the melybdenum ochre, MoO₂, the most moments of a system of forces about

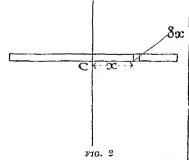
a point is equal to the moment of or plane. Generally, the body rotates their resultant about that point, about an axis which is treated paying due regard to sign. The common convention of signs is that the moment is positive if the force tends to turn the body about the point in a counter-clockwise direction, negative when the body tends!



to turn in the opposite direction. physical interpretation of the moment of a force is noticed by supposing the body to be a plane lamina, one point P being fixed. A force applied to it would tend to turn the body about the point P as centre, and hence this effect would only be zero when the force is zero or the line of action of the force passes through P.

Moment of inertia.—A constant of

a body which is most important in the mathematics of the rotation of a rigid body. Consider a rigid body



divided up into very small particles, the moment of inertia of the body about a given point, line, or plane is defined as the sum of the products obtained by multiplying the mass of wery important theorems in coneach element by the square of its distance from the given point, line, following: (1) If we take three per-

The mathematically as a line, hence the moment of inertia of a body about a line is of most importance. simple cases are noticed here. The easiest method of calculating the moment of inertia is by means of the integral ealentus. A uniform rod of length 21 and line donsity protates about an axis perpendicular to it through its centre C (Fig. 2). Take an element ϵx at distance xfrom C. Its mass= $\rho \delta x$, its moment of inertia = $\rho x^2 \delta x$, ther moment of inertia of therefore total the rod≈ L^2 $2\int_{0}^{l} \rho x^{2} \delta x = 2\rho \cdot \frac{1}{3} = M\frac{1}{3}$, where M= total mass=21p. The moment of inertia of a rectangle, sides 2a and 2b, is found by dividing it up into thin rods parallel to one side, e.g.

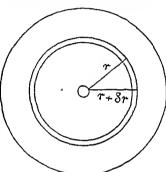
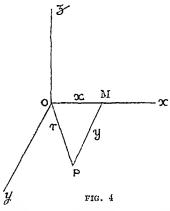


FIG. 3

side of length 2b. Then the moment of inertia of the rectangle about a line through its centre parallel to the

side $2a = M_{\overline{3}}^{o}$, where M is the total mass of the rectangle. A circular plate (Fig. 3) is divided up into annular rings. If O is the centre, take A circular the ring, the radii of whose boundaries are r and $r+\delta r$. Its mass= p = density. $2\pi r.p.\delta r.$, where moment of inertia about an axis 0 perpendicular through the plane of the plate = $2\pi r \rho . \delta r + r^2$. Total moment of inertia of the plate= $\int_{0}^{a} 2\pi \rho r^{3} \delta r$, where a is the radius.

pendicular axes ox, oy, oz (Fig. 4), and itself. Clearly when the beam bends, consider the moment of inertia of a the upper surface is clongated and partielo of mass m about these axes, the position of the partiele being in the xy plane and having co-ordinates (x, y), i.e. oM=x, MP=y, then $I_x=1$ my^2 , $I_v = mx^2$, $I_z = mr^2$, where I denotes the moment of inertia, and the suffix the axis about which the moment of inertia is taken. Then I_x+I_y $=m(x^2+y^2)=mr^2=I_2$ (2) Again. I_1 =moment of inertia of the body about an axis through the centre of gravity and I_2 =moment of inertia about a parallel axis at a distance hfrom it, then $I_2 = I_1 + Mh^2$, where M =mass of the body. Thus the moment of inertia of a circular plate about

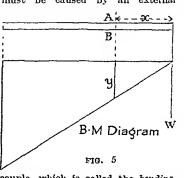


an axis perpendicular to its plane , hence the moment of inertia about a diameter=Ma2 , since the first axis is perpendicular to the diameter and from the symmetry of the figure the moment of inertia about any diameter is the same, any

a tangent= $\frac{M^{1/4}}{4} + Ma^2$ by the second

Bending moment.—Consider a beam fixed at one end, a load can be applied to the other greater than it i can bear. The beam may bend to such an extent that rupture takes place or one part slides over the other. If the beam does not break the load If the beam does not break the load weight per unit length. Then load still tends to produce the above on part DC is considered as acting at results, which tendency is resisted by its centre of gravity. Bending moment stresses called lute play in the beam at $AB = \frac{1}{2}wx^2$. The bending moment.

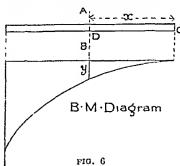
the lower surface is compressed, and the stresses generated are obviously equal and opposite in direction, thus This couple constituting a couple. resists the bending which necessarily must be caused by an external



couple, which is called the bending moment at the section of the beam under consideration, and is equal to the moments of the external forces on the part of the beam on one side of

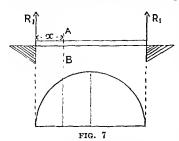
tho section about the section.

Examples: (1) Cantilever with a load at the free end (Fig. 5).—Take section AB whose distance from the free Then the bending moment at this section = Wx, if the bending moment is represented graphically



by y and tho bending moment diagram by the triangle, since y = Wx. (2) Cantilever with uniformly distributed load (Fig. 6). — Let $w = \frac{1}{2}$

diagram in this case is a parahola and the hending moment is represented by y. (3) Beam uniformly loaded and supported at both ends (Fig. 7).—Let R, be the reactions, w=weight per unit length. Then hending moment at $AB = R_1x - \frac{1}{2}wx^2 = \frac{1}{2}wx(L-x)$, where L =length of the beam. Bending



moment diagram is a parabola. The bending moment is clearly greatest at the middle point= $\frac{1}{2}w.\frac{L}{2}(\frac{L}{2})=\frac{wL^2}{8}$. The more complicated questions of rolling loads, and loads unevenly distributed, admit of similar solutions.

Turning moments.—A flywheel of an engine acting against a friction brake is an example of this. The wheel rotates against a force, and thus there is a turning moment which in the steady state of motion is equal to the moment of the frictional force

about the axis.

Momentum, a quantity in dynamics obtained by multiplying the mass of a body hy its velocity. It is a directed quantity, and the M. of a system of particles is obtained by adding to-gether the M. of the several comgether the M. of the several component particles according to the vector law. The inpulse of a force on a particle is measured by the change of M. it produces in it, and thus by Newton's third law the total M. of a system cannot he altered by any action between its component at the N.W. end of Lake Managua. parts. This principle is known as the In the vicinity is the active volcano conservation of momentum.

Momerie, Alfred Williams (1848-1900), an English divine, born in London. He was ordained priest in 1879. In 1880 he was appointed professor of logic and mental philosophy at King's College, London, and in 1883 chosen morning preacher at the Foundling Hospital. Hc published sermons and works on the philosophy

of Christianity.

Mominabad, a tn. in Nizam's Dominions, Central India, 165 m. N.W. of Haiderabad. Pop. 14,000.

German classical scholar and historian, born at Garding in Schleswig-Holstein. His detailed knowledge of Holstein. His detailed knowledge of Roman history and critical methods of procedure attracted the attention of the Berlin Academy, who commissioned lim to examine Roman inscriptions in France and Italy. In 1848 M. became professor of jurisprudence at Leipzig, but he was compelled to petity from this office in pelled to retire from this office in 1850 owing to his revolutionary tendeneics in politics. In 1852 he was appointed to the chair of Roman law at Zürich, and in 1854 he became professor of the same subject at Breslau. In 1858 he hecame professor of ancient history at Berlin, and during his professorship he compiled the famous Corpus Inscriptionum Latinarum and assisted in the com-pilation of the Monumenta Germaniæ Historica. From 1873-95 he held the Mistorica. From 1873-95 he neig one position of secretary to the Berlin Academy of Scionces. From 1873-82 he was a member of the Prussian House of Representatives, and was consistently democratic in his views. His chief works, beside those mentioned, are: Oskische Studien, 1845; Die Unteritalischen Dialekte, 1850; Corpus Inscriptionum Neapolitanarum, 1851; Die Rechtsfrage Zwischen Gäsar und dem Senat, 1857; Geschichte des römischen Münzwesens, 1860; Res Gestæ Divi Augusti; and an edition of the famous Monumentum Aneyra-num. But it is for his History of Rome (1853-56) (see Everyman's Library, Eng. trans.) that the name of M. will chiefly be remomhered. The author's extensive knowledge and critical insight place the work in the forefront of Roman histories.

Momordica, a genus of tropical climbing plants (order Cucurbitacee), with white or yellow flowers and ornamental gourds of various shapes,

of Momotombo (6124 ft.), which was in eruption in 1902 and 1905.

Mompos, or Mompox, a tn. in the dept. of Bolivar, Colombia, on the Magdalcna R., 110 m. S.E. of Magdalena R., 110 m. S.E. of Cartagena. It was formerly a pros-perous port. Pop. 10,000.

Mompox, see Mompos.

Mona, the name used hy Tacitus for the Isle of Anglescy.

Monaco, a small Italian principality, bounded on the S. by the Mediterranean and surrounded on all its other sides by the French department Mommsen, Theodor (1817-1903), a of Alpes Maritimes. Area 8 sq. m. M.

the name of Jacques I. It was annexed by France in 1793, and was ceded to Sardinia in 1846. It then came into the possession of King Victor Emmanuel, who sold it to France in 1861. The principality is still under the protection of France. Until 1910 the Prince was an absolute ruler, but in that year a constitution established providing for a national council elected by universal The capital is Monaco (pop. 2410), other towns heing La Condamine (6218), and Monte Carlo (3794). The principality flourishes chiefly on the famous Casino and Catholic hishop (since 1887). The climate is temperate and pleasant. Palms, olives, oranges, citrons, and aloes grow abundantly. The capital has a fine palace, cathodral, college, museum, ctc. Perfumery, spirits, and pottery are the chief manufs. The ruling sovereign is Princo Albert (b. 1848, succeeded 1889). Pop. of principality, 19,121.

Monad, see Infusorians.

Monad and Monadism. The philosophy of Leibaiz (q.v.), which is included in these terms, is intermediary between that of Spinoza (q.v.) or monism, and that of Descartes (q.v.) or dualism. A M. may he said to be the ultimate constituent of all substance, monade are simple. of all substance; monads are simple and similar in constitution; they only differ qualitatively; each is a self-contained individuality, and a monad has two qualities-perception, or capacity to mirror the universe, and appetite, or striving. From the and appeare, or striving. From the highest monad, which is God, to the very lowest all are constituted so that at all moments they are all in harmony, although each works out its own development under its own laws independently of all the others. Man is huilt up of a complexity of monads, while his soul is a single monad, the centre of his heing. See Leihniz, Monadologie (trans. by Latta), and Nouveaux Essais (trans. by Langley).

Monadnock, Mount, or Grand Monadnock. anisolated mountain Cheshire co., S.W. of New Hamp-shire, U.S.A. Alt. 3186 ft.

Monaghan: 1. An inland co. in the prov. of Ulster, Irciand. The N. is watered by the Blackwater, the S. by the Fane and Glyde, and the W. hy

came into the hands of the Grimaldi | managh. None of the rivers are navifamily in 968. In 1715 it passed into gablo. The Ulster Canal, which unites the female line, and on the death of loughs Neagh and Erne, traverses the Louiso Hippolyte, her husband, county near M. and Clones. The S. Count of Thorigny, succeeded under contains rich and productive land, hut the most fertilo part is the central. including the baronies of M., Cremorne, and Dartree, Agriculture is the main occupation, flax and wheat the main occupation, nax and wheat heing the chief products. Linen is the chief manuf. The area is 500 sq. m. Pop. (1911) 71,395. 2. The co. tn., 15 m. W.S.W. of Armagh, contains the coilege of Macartan and a Roman Catholic chapel. The borough obtained its charter from James I. Pop. (1911) 2932.

Monarchianism. The term applied derisively hy Tertullian to those heretics of the 2nd and 3rd centuries who denied the doctrine of the Trinity and constituted themselves the defenders of the 'Monarchy of God ' or Christian monotheism. Latter-day historians olassify Monarchians into the Adoptionist (frem the view that Christ was the Son of God by adoption only) or Dynamistic sect, who held Christ to be a human heing endowed with divine powers, and the Modalistic sect, who regarded Christ as the incarnation of God the Father, and maintained generally that the Trinity was really reducible to different conceptions under which the One Divine Being might be viewed. According to the authority of The Little Lobyrinth, an anonymous work ascribed variously to one Caius, a member of the Roman Church, Theodoret, and to heresy against the directed Artemon and Theodotus, it seems that one Theodotus, a shoemaker, was the first to teach that Jesus was mere man, and incurred excommunication for his views. Artemon, who be-longed to the ante-Niceno Monarchians (or Adoptionists), declared the doctrine of the divinity to ho an innovation dating from Zephyrinus and a relapse into heathen polythelsm. He also asserted that Christ was a mere man, but born of a virgin, and superior in virtue to the prophets. His views, for which he, too, incurred excommunication, were developed by Paul of Samosata (see Eusehius, Hist. Eccl.). The dynamistic heretics are largely associated with the Alogians, or deriders of the Legos, the term Alogians or Alogi being invented by Epiphanius to emphasise their rejection of the divine word preached by John. Their views are regarded by Epiphanius as inspired by Theodotus, hut they ought to be distinguished from the more thoroughthe Erne. The surface generally is distinguished from the more thorough-hilly, the Sileve Beagh range, 1250 ft. going heretics, the Ebionitcs, and at its highest point, extending along apparently they are not to be the whole N.W. houndary into Fername mainly associated with the Santa Laura, Mt. Athos, may Modalistic M. is that of Praxeas, taken as a typical Eastern M. I against whom Tertullian especially hurled his fulminations. Praxeas was both Monarchian and Patripassian (the Western name for the Sabellian heresy that God the Father suffered (patior) in the person of the Son). Praxeas (whose real name has been asserted to be no other than Epigonus) was a confessor from Asia Minor, 'the seed plot of the Monarchian views.' He converted the Pope Elcutherus (or according to others, Pope Zephyrinus), and by so doing, says Tertullian, did a twofold service for the devil at Rome, for 'ho drove away prophecy He put to and introduced heresy. He put to flight the Paraclete and he orucified the Father.' See also Harnack's article on M. in Herzog's Real-Encyclopädic; Tertullian (Dodgson's trans.); and Dictionary of Christian Antiquities (passim).

Monarchy, see Sovereignty. Monarda, a gonus of N. American rennials (order Labiatæ). M. dyma, the sweet bergamet, er percnnials didyma, the sweet bergamet, or Oswego tea, bears whorls of fragrant scarlet flowers from June to August.

Monasterevin, or Monasterevan, a par, and market tn, in the co. and 6 m. W.S.W. of the tn. of Kildarc, Ircland; has broweries and distillerics. Pop. (1911) 2000.

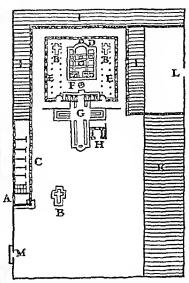
Monastery, an abbey, priory, or convent for monks or nuns dedicated to the religious life and under the rule of an abbot or abhess, except in the case of the cathedral convents, where the bishop was the abbot and the superior of the establishment was called a prior or prioress. In its early stages when monasticism was practised in the eremitical form, the Ms. were merely groups of cells or huts. St. Pachomius built his first M. in the form of a villago, with rows of huts large enough to accommodate three monks in each, and with a common refectory and a church. Under his rule the monks worked at different

formed part roduce being shipped to Alexandria and sold to support the community. As time went on and the number of convents grew, it not only became necessary to make the cstablishments more compact, but it also became necessary to guard them from outside attack, and encompass them with means defence, and the monks then creeted massive buildings, containing all tho necessary accommodation and surrounded with high walls as a protection against a possible enemy.

carpentering,

enclosed within high stone walls, and occupies between three and four acres of ground. The main entrance, which is composed of three iron doors, is on the N. side, and is guarded by a tower, the only other entranco being a small postern on the S. side. On r courtyard

facing, and use with a cloister running along the front. The



MONASTERY OF SANTA LAURA, MOUNT ATHOS (LENOIR)

, Gateway; B, chapels; C, guest-house; D, church; E, cloisters; F, fountain; G, refectory; H, kitchen; I, cells; K, storehouses; chen; I, cells; K, st. L, postern gate; M, tower.

refectory, kitchens, storehouses, etc., are also in this courtyard, which thus becomes the centre of the material life of the community, while the inner courtyard forms the centre of the religious life. Passing through, the

the courtyard, which is surrounded by cloisters on to which open the cells of the monks, and in front of it The Eastern or Oriental Ms. dif-fered slightly in their architectural plan from those of the West. That of courtyard, the entrance is effected from the inner courtyard; it is a large, are placed in a separate group. There erueiform building, and is decorated with frescoes representing various saints. In the Eastern M. this building took the place of a chapter-house. the meals as a rule being taken in

solitude in the cells. The Coptio Ms. adopted a different 'L- comtyards

being ceunies the N. alongside it runs an innense gallery with the cells opening out on either sido. It was during the great monastic revival of St. Benedlet (see MONASTI-CISM) that the greatest number of beautiful Ms. were built. The Benedictine Ms. all followed one architeetural plan, which was, of course, modified according to the sic. The buildings were erceted in a series of groups; the church, as the centre of the religious life of the community, was placed in a claistered courtyard. round which were ranged the other buildings forming a necessary part of the mouastic life, the chapter-house, the dormitory, the common room, and the reference. Another group is formed by the infirmary, w physician's house and physic . .

beyond the convent enclosure other two for monks and poor travellers were placed on elther side of the main entrance. The buildings conneeted with the material wants of the three aisles by pillars and arohes. Tho

and the school for the novice

needed with the material wants of the interest of the refeelory is also a church the kitchen, buttery. church, the kitchen, buttery, house, brewhouse, etc., the refe being reached by a passage from kitchen, and beyond these were ranged the workshop, st.

and farm buildings. The great Swiss M. of St. Gall (820 A.D.) was a typical Benedictine M., and the same plan is followed out more or less fait hfully in most of their buildings, with slight variatious due to the locality. So, for instance, at Centerbury the cloister and monestic buildings are situated to the N. of the church instead of the S. as is usual, and at Worcester and Durham the dormitories follow a

slight difference in arrangement. At Westminster Abbey and St. Mary's Abbey, York, the original Benedle-

tine plan is adhered to.

The Cluniac Ms. grouped their buildings somewhat differently, and in the plan of the abbey of Cluny, founded by William, Duke of Aquitaine and Count of Auvergne, the taine and Count of Auvergne, the cloister is placed considerably further W. than is usual, and the monastio Benedictine plan more or less, but a buildings do not open out of it, but leading characteristic of their build-

were not a great number of Cluniao houses in England, the one at Lewes was the first, but the best preserved aro at Castle Aere and Wenlock.

Following on the Cluniao Ms. came those of the Cisterciaus, the chief characteristic of which was their plainness and simplicity, the outward expression of the rigid rule they ward expression of the right rue diesy adopted. Unnecessary decoration of any sort was forbidden, such as turrers, plnnacles, or stained glass, and the sites chosen were usually wild and desolate. The first of their houses was the abbey of Citeaux. They followed out a particular plan. The buildings were divided into two wards, separated by a wall, in the outer were the barns, granaries, stables, workshops, cie, and in the inner the monastic buildings proper, with the church occupying the central position, At Clairvaux (A.D. 1116) there are two eloisters, and on the eastern side beyond the monastic bulldings there are gardens, orchards, and fish-ponds placed outside the convent walls. The church was also built on a plan to those of with a very short

th was, as a rule, ivariably had two abbot's house and the outer school, square chapels on the E. sido of the with the guest-house for distinguished trausents, which were divided off visitors not far distant. Usually with solid walls, and at Chairraux there were three guest-houses, the there are nine chapels radiating one already mentioned, while the round the apse, also divided by solid Usually with solld walls, and at Clairvaux round the apse, also divided by solid walls. In the Cisterelan Ms. tho chanter-house was always quadrangular, and was divided into two or

> laced parallel to the removed from it, and but in the Cistercian

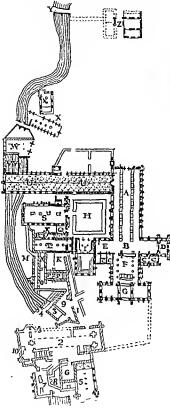
houses it was placed at right angles to the church, and ran N. and S. The buildings may be placed in five groups. (1) The outer ward containing all the buildings connected with labour of all kinds. (2) Those connected with hospitality and the material require-ments of t within the

and monas cloister, wi

and literary requirements. (5) The infirmary and novices' quarters. The first Cisterclan house to be founded in England was that of Waverley Abbey. near Farnham, of which but little now remains. That of Fountains Abbey, Yorkshiro, Is the best preserved, others being at Rievaulx, Kirkstall, Tintern, Netley, etc.

The Augustinian Ms. followed the

ings is the immenso length of their At Lianthony and Christ Church churches, which were dovised to (Twynham) the choir is shut off from accommodate large congregations. the aisles. Sometimes there are no



GROUND PLAN OF FOUNTAINS ABBEY, YORKSHIRE

ABBEY, YORKSHIRE

A, Nave of the cburch; B, transept;
C, chapels; D, tower; E, sacristy;
F, chor; G, chapel of nine altars;
H, cloisters; I, chapter-house; K,
base court; L, calefactory; M, watercourse; N, cellar; O, brewbouse;
P, prisons; Q, kitchens; R, offices;
S, refectory; T, buttery; U, cellar
and storehouse; V, necessary; W,
infirmary; X, guest-house; Y, mill
bridge; Z, gate-house, abbot's bouse.

1, Passage; 2, great hall; 3, refectory;
4, buttery; 5, storehouse; 6, chapel;
7, kitchen; 8, ashpit; 9, yard;

kitchen tank.

At Lianthony and Christ Church (Twynham) the choir is shut off from the aisles. Sometimes there are no aisles at all, as at Bolton and Kirkham, while at Brinkhurn and Lanercost there are only N. aisles. The abbey of St. Augustine at Bristol was typical of the Austin canons, their church now being used as the

cathedral.

The Premonstratensians, in huilding, followed the plan of the Austin canons, of which they were a branch. The first English establishment was at Newhouse in Lincolnshire (1140 A.D.), but the hest preserved are those of Easby, Yorkshire, and Bayham, Kent. At Eashy it is notleeablo that tho buildings are not arranged with the usual uniformity and precision which gives a somewhat straggling appearance, and the clurch at Bayham is oharacterised by its extreme narrowness and the absence of

all aisles.

The Carthusian Ms. departed from all the other communities in their architectural plan, owing to a wide difference in their rule. Their order sprang up when eremitical monasticism was revived, and as solitude and silence were enjoined by their founder. St. Bruno, it was necessary to build in such a manner that this could be carried out. The M. was therefore arranged in a series of cells or small cottages, cach containing a livingroom, sleeping-room, etc., surrounded by a small garden, and opening on to a corridor, which in its turn opened on to a cloistered gallery connecting the whole. At the great Carthusian M. of Clermont these cells occupy three sides of the cloister, and on the W. lies the church, the chapter-house, and refectory, with the other neces-sary offices. This arrangement is invariably found throughout the charter-houses, as they were called in England, of which there were never more than nine. The best preserved is that of Mt. Grace in Yorkshire, though that of Witham in Somersetshire is the earliest. Others were at Sheen, Richmond, and the famous Charter

House in London.

A word must be said ahout the monastic buildings of the Mendieant orders, which formed a distinct class. They were usually planted in large towns, and were of necessity adapted to the sites chosen, so that there was seldom any regularity in the buildings, and their best efforts were concentrated on their churches, which were built with a view to accommodating large congregations. These were generally long-shaped buildings without any transepts, the nave being divided into two parts, one for the brotherhood, and the other for

a rulo square, and there was no choir. In some of the Irish monasteries one transept may be found as large or even larger than the nave. Originally these churches had no towers, but in some of the structures of the 14th and 15th centuries, where a choir was introduced, there were tall, slight towers, while the Grey Friars' (Franciscan) at Lynne has an hexagonal tower. One of the best preserved English friarles is that of the Dominicans at Gloucester, where there is also a Franciscan convent. Tho Dominicans' bouse at Norwich may also be quoted. Of the Carmelite or White Friars, the best example is the Abbey of Hulne near Alnwick, which was their first foundation in England (1240 A.D.). Of the Black Friars and Grey Friars in London, only the names remain, but the nave of the church of the Austin Friars has been preserved. The destruction of the beautiful Ms. in England must be laid at the door of Henry VIII. and his adviser, Thomas Cromwell. They saw in the monastic property vast possibilities of wealth. The Act of Dissolution of wealth. The Act of Dissolution passed in 1536 suppressed all Ms. with an income of less than £200 a year, but though this still left the larger Ms. free, they gradually fell into the king's hands, through the attainder of their abbots, as at Glastonbury, and they shared the fate of their lesser brethren. Many of them have fallen into rule from neglect and decay. See Lonoir, Architecture mon-aslique, 1852-56: Gasquet, English Monastic Life, 1904, containing full bibliography and complete list English houses; and Hamilton Thompson, English Monasteries, 1913. Monasticism (from Lat. monachus,

a monk; Gk. μονάχὸς, solitary), a general name descriptive of a mode of religious life which has prevailed in the Church from almost the earliest ages, and which, during many periods of its history, has formed the most characteristic and powerful expression of its activity. It sprang into settled existence during the 3rd century, and was the natural product of many influences then moving the Church. Previously to this period, indeed, a system of solitary and ascetic devotion is found prevailing among the Jews both in Palestine and in Alexandric Wile wain causes out in Alexandria. The main causes out of which M. arose, however, are undoubtedly to be found within the Church itself — in those hardships and perseoutions which oppressed it,

the congregation. The E. end was as | Christians were driven from their homes in search of shelter from the reiontless vengeance which pursued The comparative security of those remote wilds in which they sought refuge seems to have been the direct source of the monastic idea. Such an Isolation as that in which many now found themselves came to bo regarded by them as the only possible realisation of the Christian life. Egypt was the frultful soil in which such thoughts germinated and sprung to maturity. The honour of their original has been shared by two names—Basil and Anthony; the former of whom may be regarded as the first in point of time who exemplified in his own practice that Christlan asceticism which developed into M.; but the latter of whom was really the first who drew such attention to the monastic life as to spread abroadits fame and attract many to its adoption. Anthony was born on the borders of Upper Egypt, in the village of Coma, in the province of Heracleopolis, about the year 251. A spirit of simple and carnest, but somewhat unintelligent, piety animated him from his youth. Losing both his parents about his twentleth year, the care of a young sister and of considerable property devolved upon him. Setting aside the ordinary Christian obligations arising out of this position, he conceived himself called upon to dispose of his property, and submit to a life of voluntary poverty in which he might with-out impediment give himself to his spiritual duties. In obedience to this impulso, he assigned his landed estates to the inhabitants of his native vil-lage, under condition that he should receive no trouble as to any charges to which they were liable; and having made provision for the education of his sister with a society of pious virgins, he settled down near his paternal mansion, and commenced a life of rigid asceticism. He supported him-self by the labour of his hands, and distributed whatever exceeded the supply of his own bare wants for the benefit of the poor. Those natural benefit of the poor. Those natural feelings which he strove to mortify continued to assert thomselves in such a manner as to disturb the seronity of his spiritual contempla-tions. Afterwards he learned the more Christian way of resisting such temptations by cheerful activity and trust in the presence of the Lord. Ho retired to a farther distance from his native village, and took up his abode in a recess of rock, such as the Egy especially during that age, and the tians used for purposes of entombspirit which these persecutions naturally qulckened and fostered. During the severities which followed the ediot ness and carried back in a fainting of Decius in the year 250, many

his name. The deserts of Egypt began to swarm with devotces, who courted that which, upon the whole, with all his presence and example, and naturally acknowledged him as their leader. Followers gathered around him in spite of all his efforts to maintain his privacy; and the first rudi-ments of a monastery grew up in this remote wild. Anthony did not indeed aim at any completo organisation of his followers; this task remained for another; but he taught them to labour for their support, and directed to some extent their religious dutics. virtue were supposed to attach to his person. He distinguished himself at such times of public activity as the warm friend of Athanasius in his contest with Arianism; and it is to this circumstance that we probably owe the record of his life from the pen of the great Trinitarian-a record to which the historian is indebted for such facts as we have now related. The system thus begun by Anthony speedily spread into Syria and Palestine. Hilarion, a disciple of Anthony, was chiefly instrumental in the promotion of M. in Palestine; while the great Basil of Cesarea, the fellowstudent and friend of Gregory Nazianzen, warmly embraced its spirit, and more than any other contributed to its progress throughout Syria and to the shores of the Black Sea. Gregory, indeed, never virtually assumed, like Basil, the monastic vows; but the triumph of the ascetical bent was in the end scarcely less complete in him than in his friend. While the institu-tion of M. thus extended itself, from ciated with the name of Pachomius, another Egyptian ascetic. To him is attributed the foundation of the cloister life, or the collection of the monks in sevoral classes, according to a regular system, and in one large connected building. This was pro-perly the first establishment of the nonks in several classes, according to a regular system, and in one large connected building. This was product the first establishment of the perly the first establishment of the monastery or conobium. In the task by a self-discipline of the strictest character. Secluding himself from all natural course of things this organised form of M. soon came to usurp a stion, unrelieved by a stion, unrelieved by a expression of the ascetio spirit.

village. Ho afterwards sought a still lishmonts. The most various results, more distant retirement, where he as may be imagined, sprang from an remained for twenty years, maturing institution like Eastern M. In some a saintly remown which spread abroad cases there was formed a comparatively pure spirit of devotion, such as

an ungrudging spirit maintenance and lodgings. Individual fanaticism, moreover, took the most grotesque and incredible shapes; as in the case of the famous Simeon Stylites, who is roported to have passed thirty years on the top of a pillar 60 ft. from the ground. Athanasius has obtained the The life of Anthony was prolonged to reputation of extending N. into the upwards of a hundred years, and his saintly fame, as may be easily concived, grew with his years, till a peculiar sacredness and a miraculous train, whose austerities and dovotion. though at first disgusting to the polished Romans, gradually attracted interest and at length admiration. His Life of Anthony, moreover, which was speedily translated into Latin, gave a great impulse to the monastic spirit. All the most illustrious of the Western teachers contributed by their eountenance to this result. Ambrose of Milan, Martin of Tours, and even Augustine, were drawn within its influence, and lent it their encouragement. The restless activity of Jerome during his residence in Rome was exerted in its behalf, and under his influence rich and noble ladies were led to retire from the world and conscerate themselves, amid the solitudes of Palestine, to a life of devotion. The labours of Martin of Tours, and of Cassian at Marseilles, were especially successful in transferring M. west-wards, until, in the course of the 5th century, thousands of devotees spread themselves through the south and middle of France into Britain and Ircland. A yet more thorough system the oxample of Anthony, not only in of organisation was accordingly Egypt but throughout the East, its more complete organisation is associated with the name of Pachomius, date it in its diffusion. And such a system was not long wanting. There arose among the monks of Italy one who saw the dangers to which M. was exposed, and who resolved to en-counter them hy a more systematic

I his retreat unknown earlier Anachorcts—who lived in to any save a brother monk, who prosingle cells, with only a casual combination and without submitting to this own daily allowance of food by any definite rule—were gradually dropping it by a rope to the foot of a absorbed into the more regular estabBenedict lived. Some shepherds at St. Benedict (Waddington's Church leugth discovered his retreat, and History, vol. ii. p. 377). As a monk it spread abroad the fame of the holy was that Hildebrand nursed those His influence was thus at once secured; he was invited to the convent, and

ndor protestaof the govern-

ment which he would feel bound to establish would prove intolerable to those who gave him the invitation. It turned out as he supposed: the refractory mouks even sought his life; and, leaving them in disgust, he retired once more to his solitude. This event once more to ms solicule. This event only contributed the more to his fame. He was gradually enabled to found and regulate, according to his own plan, twelvo cloisters in the neighbourhood of his original scelusion. Biggrapus & years the according to sion. Rigorous as were the personal austerities of St. Benedict, ho was convinced by experience that an un-due severity of fasting and mortification was incompatible with a Western climato and Western habits. His rule was characterised rather by its simplicity and order than by any par-ticular severity. Two hours after midnight the monks were aroused to vigils, and the time between this and daybreak was consumed in learning daybreak was consumed in learning the psalms by heart, or some other similar study. At daybreak matins were performed, somewhat in the same manner as vigils, by chanting psalms and reading lessons from Scripture. The duty of private and mental prayer was also enjoined under certain restrictions. These under certain restrictions. early sorvices were followed throughout the day by manual labour and reading. During summer the day was so divided that seven hours were given to the former occupation and at least two to the latter; during winter more time was given to study, but no altoration appears to have been mado in the hours of labour. The Sabbath was entirely given to reading and The rule thus established by prayor. The rule thus established by Benedict extended itself, as we have said, throughout the West, and for many years was instrumental in preserving the integrity and simplicity of devotion in its cloisters. With the gradual increase of riches, however, the Bcuedictino monasteries lost their primitive character, and became the seats of indoleuce and vice. attempts wero made to revive the first rigour of the rule, and still more successfully to apply it in new forms, cach of which in its turn achieved a great reputation, and powerfully helped the cause of the papacy in the different countries into which

ambitious schemes which he afterwards carried out as Gregory VII. The immertal name of St. Bernard is associated with the Cistercian order. of which the Abbey of Clairvaux was a dependent, and the simple purity of the Carthusians acquired for them a great reputation. In the meantime other forms of monastic order had sprung up, the most notable and dis-tinguished of which, dating from au carly period, was the order of St. Augustine, which was destined to t in the ad-

This order. chiefly comcclesiastics. nerally, ac-

there were but a few cligible or devoted to the ecclesiastical life. There are still two further developments of arc still two further developments of the monastic system that claim notice. These are the rise and estab-lishment of the Military and the Mendicant or Preaching orders. The former sprang up out of the close union subsisting between the eccle-siastical and the military professions in the middle ages, and especially out of the crusading spirit of the 12th century. They are well known under the bistorical names of the Knichts of the historical names of the Knights of the Hospital, the Knights Templar, and the Teutonic Order. They took their rise in Palestine. They gradually disappeared about the time of the Reformation. While the Military orders arose out of the external necessities of the Church, and the warlike spirit kindled by the advance of Mo-hammedanism, the Mendicant orders originated in the internal dangers of the Church from the encroaching spirit of reform and of free opinion. St. Dominic (1191) acquired his fame as a preacher against the heresy of the Albigenses; and, recognising the effects following such eloquence in his own case, he framed the bold idea of own case, he framed the fold dea of establishing an order of Mendicant preachers whose vow should especially bind them to the interests of the Holy See and the extirpation of heresy. Innocent III. at first looked coldly on the project, but its obvious policy soon commended it to papal recognition. For it was under the recognition. For it was under the shadow of the Dominican order that the Inquisition inaugurated its career. St. Francis of Assisi was a contemporary of St. Dominic, and pursued, independently of him, a similar course of fanatical activity. The story of his spread. In this manner arose the interview with Innocent III., when he order of St. Cluny, and the Cistercian first appeared before him with his and Carthusian and Carthus and Cart and Carthusian orders—all branches, plan, is well known. Hurried away as it has been said, from the stem of from the holy presence as a mean

madman -- a dream aroused the pontiff to his mistake, and led him to lend all his countenance to a scheme which at first he repelled. While preaching was the characteristic foature of the Dominican rule, poverty was intended to be the chief distinction of that of St. Francis: but the two orders gradually merged their dis-tinctive peculiarities, and the members of each gave themselves equally to mendicanoy and preaching. The history of these orders, as well as that of Jesuitism, which may be said to be a development of the monastic spirit, but in such a distinct shape as to require separate notice, is inseparably bound up with that of the papacy. Since the Reformation M. cannot be said to have manifested any inherent vitality or power. With the advance of modern civilisation, its highest meaning and only conservative use are gone; and, so far as it still maintains itself in Europe, it must be beld to be an opponent at once of genuine religious life and the advance of an elevated rational cultivation. the more particular history of M., the general reador may be referred to the Church Histories of Neander, Waddington, and Milman; and for a special account of its earlier phases, to Burgham's Antiquities, and the learned reader to Helyot's Histoire des Ordres Monastiques (Paris), 1714 and 1792

and 1792.

Monastir: 1. A fortified scaport of Tunis, on the Gulf of Hammamet, 65 m. S.E. of Tunis; exports elives and oil. Pop. 6000. 2. Or Bitolia, cap. of the vilayet of Monastir, in Servian Maccdonia, 136 m. by rail W.N.W. of Salonika. There are exports of grain, tobacco, wool and skins, and manufs. of gold and silver filigree result and capacts. Pop. (estimated) work and carpets. Pop. (estimated)

45,000.

Monboddo, James Burnett, Lord (1714-99), a Scottish judge and metaphysician, practised as a barrister till 1767, when he was made judge in the Court of Session. Among his contemporaries he had the reputation of an cceentric because he gave learned suppers and rode on horseback after the manner of the ancients, and because in his Origin and Progress of Language (1773), and his Ancient Metaphysics (1779-99), he exposed man's affinity to the orang-outang, thus in a measure anticipating the Darwinian theory. See Peacock's Metincourt, where the idea is ludicrously developed. Boswell describes, in his Tour to the Hebrides, an interview between Lord Monboddo and Dr. Johnson.

Monbuttu, a country in Central Africa, Inhabited by a negro race of cannibals, visited by Schweinfurth.

Moncalieri, a tn. in the prov. and 5 m.S. of the city of Turin, Picdmont, Italy, on the r. b. of the R. Po. It has a royal palaco, and manufs. of matches and bricks. Pop. 11,561. Moncarapacho, a tn. in the dist. and 8 m. N.E. of the port of Faro, Algarye. Portugal; wine industry.

Algarve,

Pop. 5060.

Moncayo, a mountain on the boundaries of Aragon and Castile, Spain, 55 m. W. of Saragossa. Alt. 7600 ft.

Mönch, a famous peak in the Bernese Alps, Switzerland, 3 m. N.E.

Bernese Alps, Switzerland, 3 m. N.E. of the Jungfrau. Alt. 13.468 ft.
Monohique, a tn. in the dist. and 40 m. W.N.W. of the port of Faro, Algarve, Portugal. Its hot springs, called Caldas de Monchique, arcefficacious in skin diceases. Pop. 7500.
Monek, Sir Charles Stanley, fourth Viscount (1819-94), first governorgeneral of Canada, born at Templemore, Tipperary. He entered parliament in 1852 as member for Portsmouth. He was appointed cantainment. mouth. He was appointed captaingeneral and governor of Canada and British N. America in 1861. M. was the chief promoter of the federal constitution of Canada (1867).

stitution of Canada (1867).
Monck, George, first Duko of Albemarie (1608-70), a British general and admiral, born at Potheridge, Devonshire. He fought at Cadiz (1625), Rh6 (1627). He was a colonel under Charles I, in the Scottlish war (1639), In 1644 he was taken prisoner by Fairfax at Nantwich, and imprisoned for two years in the Tower (1644-6).

commander in Scotland, and took Edinburgh in 1659. In 1660 he restored Charles II. As admiral of the fleet in 1664, he won a decisive victory over the Dutch. Lives of M. have been written by Thomas Gumble (1671), Guizot, and Julian Corbett.

Monclova, a tn. in Coahuila, Mexico, 103 m. N.W. of Saltillo by rall; has railway shops. Pop. 15,000.

Moncontour, a vil. in the dept. of Vionne, France, 10 m. S.S.W. of Loudun, where the Huguenots, under the Huguenots,

Coligni, were defeated by the Duke of Anjou in 1569.

Moncreiff, Sir Henry Wellwood (1750-1827), a Scottish theologian and author, born in the village of Blackford. Perthshire. He became minister of the church of St. Cuthbert's, Edinburgh, in 1775, and moderator of the General Assembly in 1785. M. was a stanneh supporter of the Whig party in the Church of Scotland, and an eloquent and inspiring preacher. He is the author of Discourses on the Evidence of the Jewish and Christian Revelations (1815), and An Account of the Life and Writings of John Erskine, D.D. (1818).

Monoreiff, James, Baron Monoreiff of Tulliebole (1811-95), a Scottish iawyer and politician, born in Edinhurgh. He was called to the har in 1833. He carried measures in parliament for the abolition of religious tests in Scottish universities, and for the amendment of the law of entail,

ovidence, and hankruptcy.

Monorieff, Sir Alexander (18291906), a British soldier and inventor,
born in Perthshire. He invented in
1868 the 'Monorieff Pit,' or 'disappearing system,' a method of mounting
the heavy ordnance in coast hatteries.
A shelter receives the gun after firing,
the energy of the recoil heing stored
and suhsequently utilised to carry
the gun into firing position when
required.

Moneton, a tn. and port of entry, Westmorland co., New Brunswick, Canada, on the Petitcodiae R., 89 m. N.E. of St. John. It is the head-quarters of the Intercoionial Railway, It has cotton and woollen mills, foundries and planing mills. Natural gas and oil wells were found near M. in 1911. Pop. 10,000.

Mond, Ludwig, F.R.S., etc. (1839-1909), a chemist, born at Kassel, Ger-many. Educated at the Universities of Marburg and Heidelberg, where he studied under Bunsen. Ho came to England in 1862; introduced the process for recovering sulphur from waste products of Leblanc soda process. In partnership with J. T. Brunner (1873) established ammonia-soda process (Solvay) at works in Cheshire, now the largest aikaii works in the world. He manufactured chlorine as a hyeproduct; producer gas from waste products, recovering ammonia. Brought out a new process for the manufacture of pure nickel, in conjunction with Lange and Quincke, from nickel carhonyl, also his own discovery. He founded and endowed Davy-Faraday Research Lahoratory of Royal Institution, 1906. A portion of his collection of early Italian painters, ctc., left to the nation. Published papers in Transactions and Proceedings of the Royal Society, Royal Institution, British Association. Chemical Society and Society of Chemical Industry. product; producer gas from waste products, recovering ammonia. Chemical Industry.

Mondonedo, a tn. in the prov. and 30 m. N.N.E. of the city of Lugo, Galicia, Spain. It has a cathedral (13th century). There are marhle quarries, and manufs. of cotton and linen fabrics. Pop. 10,619.

quarries, and manufs, of cotton and linen fabrics. Pop. 10,619.

Mondovi, a tn. in the prov. of Cunco, Piedmont, Italy, 42 m. S. of Turin. Ithada university (1560-1719). There are manufs. of silks, paper, and earthenware. Pop. 19,255.

Mondragone, a com. in the prov. of Caserta, Campania, Italy, 18 m. S.E. of Gaeta. Pop. 6125.

Monemyasia, formerly called Napoli di Malvasia, a tn. in Laconia, Greece, 20 m. N.N.W. of Cape Malia. Here was exported the famous malmsey wine. Pop. 5000.

Monera, a classification of atoms of protoplasm destitute of any structural

features. See PROTOZOA.

Moneses Grandiflora, a pretty perennial piant found only in the N. of Scotland. It hears round radical leaves and a single large fragrant white flower.

Monessen, a tn. in Westmorland co., Pennsylvania, U.S.A., on the Pittshurg and Lake Eric Railroad, 1½ m. from Charleroi. It has foundries, and manufs. steel and wire-fencing.

Pop. (1910) 11,755.

Monet, Claude (b. 1840), a French artist, horn at Paris. His attempt to analyse light pictorially into its component spectral colours has greatly influenced the post-impressionists. 'Views of Argenteuil' (1872), 'Cathedrals' (1874 and 1894), 'Le Meules' (1891), and 'Le Bassin des Nymphéas' (1900) are some of his best-known works.

Monetary Unions are agreements hetween several states for the recognition of a common monetary unit in the interchange of coinage. Thus in 1865 was formed the Latin monetary union between France, Beigium, Italy, Switzerland, and Greece, which established the franc or lira as the common unit. Subsequently Ronmania, Servia, and Spain were included in the union. There is a M. U. of the states of Germany, which recognises the mark as the unit. The Scandinavian union embraces Denmark, Norway, and Sweden, and recognises the krone as the common unit.

Money. The meaning of the term M., its function as a medium of exchange, the substitutes that have been used for it at different times by different nations, and the factors which regulate the value of M., have been treated in the article Curreneve. This article deals more fully both with the question of how far the term should include instruments of credit and with the functions of M. It is an old controversy, not now by any means settled, whether or no hills of exchange, cheques on deposit accounts, and other credit instruments ought to be included in the ategory of M. Except in the details of banking husiness, hardly any one at the present day would restrict the term M. to mere cash or coined M. Most would include bank-notes, i.e. would make the terms M. and currency inter-

changeable. But most English authorities seem against the view authorities seem against the view that bills of exchange, promissory notes, letters of credit, i.c. 'auxiliary currency,' constitute M. or currency in the proper sense. Professor Sedg-wick would classify, at least, hank deposits as M., and points out (Political Economy) that though coin and bank-notes form a specially important part of money-market portant part of 'money-market money,' still, where deposit accounts with banks are part of the developed commercial system of a country, the greater part of such M. mnst necessarily 'consist of bankers' promises to pay coin on demand, not represented otherwise than hy rows of figures in their hooks. In other words, the aggregate M. in a country at any given time exists for the most part only in the shape of acknowledged liabilities or obligations, and not by any means in a vague Sinhad's vale of gold that in some way or other vale of gold that in some way or other can be got at by the banker if necessity arises. This is the very mistake Mill seems to make repeatedly, and reference to passages in Book III., ohs. xi. and xii. will make it apparent that that great economist thought that coin and paper substitutes therefor made legal tender by government together formed the medium of exchange collected by hankers from individuals and lent again to traders. Professor Sedgwick sums up the controversy by saying that if: (1) The essential function of M. is its use in exchanges and other transfors of wealth 'where the object is to transfer not some particular commodity but command over commodities generally'; and (2) 'we understand by monoy that which passes freely from owner to owner in final discharge of debts and full payment for commodities; then hankers' dehts payable on demand, ranshowever ferred, are this wner contract l from to owner hand to 1 and Industru) important ment by notes is not the physical transfer of paper, but the transfer of transfer of paper, but the transfer of backs' between 1863 and 1880. claims on the banker. Mr. Walkor's These instruments were issued in reasons for excluding credit instruments generally are these: That porary inflation of prices and specurate in analogously to harter, limits lation, with the inevitable conscible field for the operations of M. in quence of grave social and political an advanced and commercial state, but that although credit effects a corollary to the greenback's face-greet mutual capacillation of investing out of say sort of true great mutual cancellation of in-

English | and the value of M. within its limited sphere is determined just as it was before credit was introduced. includes baok-notes because they do what he calls 'the money-work,' and because they pass freely from hand to hand, 'leaving no trace of their course,' as do bills of exchange, which latter, of course, leave all the signatories. whether indorsers or drawer, in danger of liability in the event of dishonour hy the accoptor. The controversy is obviously not susceptible of a dogmatic settlement, hut certainly it would seem that Professor Sedgwick is forced to employ considerable subtlety and incenuity of argument to convince the student of economics that the ordinary trader necessarily accepts hankers (eheques) as final discharge of his book dehts. It this finality be the real test, it seems clear that Mr. Walker's exclusions aptly point the difference hetween M. and credit. Functions of money.—M. as a medium of exchange does away with

the necessity for that direct inter-change of goods which would involve the trouble of finding two persons or sets of persons who mutually desired each other's goods. So cumbersome a process could never have existed for long in any civilised society, and the universal acceptance of a desirable medium of exchange came early in the economic history of most nations. The use of a convertible paper currency or bank-notes, however, is comparatively a purely recent development. The universal acceptance of hank-notes as M. required for its fulfilment the evolution of mercantile credit, the inculcation in all men of mutual confidence, and the inter-vention of the legislation with its formal sanction of the substitution of such merely arbitrary symbols for what, prior to the change, had been a medium consisting of something which in itself was of such recognised intrinsic worth that no one in his senses would refuse it. The tardiness of the growth of confidence in hankthe notes, though issued oo the credit of government, is justified if we look to the history of the American 'green-backs' between 1863 and 1880. value getting out of any sort of true debtedness, there remain a vast relation to the ruling commercial number of transactions that can only prices. As Mr. Walker points out, be carried out by the use of M.; in this production of 'had money' is short, that M. proper comes in where really due to the fact that it is 'not the efficiency of credit is exhausted, the wants of trade, but the exigencies

of the treasury (that) are apt to demeasured in terms of each metal shall termine the amount of issues, and whenever such issues take place in whenever such Issues take place in oxcess of the wants of trade they almost inevitably go from bad to worse (Dict. Polit. Econ., 1906). But it is by no means clear what means can be employed to ensure that the laws of economics rather than fiscal discretion shall determine the size of an issue, even assuming that the former will of necessity supply a precise criterion. Another leading function of M. is to serve as the enmmon denominator of values, which is merely one way of stating that each commodity by the fact that it will readily exchange for coin or hank-notes 'takes it- place on the price-current, high up or low down, according to the demand for it.' Mr. Walker again quarrels with the older economists for their common assumption that M. as a denominator in ex-change must of necessity perform the office of measuring values, and he attributes the error to nisleading terminology, especially the phrase 'measure of value' in its application to M.; e.g. Mill postulates as one of the most obvious wants of exchange that of 'a common measure for that of 'a common measure for values of different sorts.' Mr. Walker's contention is that 'it is not essentially the nifice of a de-nominator in exchange to measure values, but only to express them, as measured, and that all commodities by heln actually exchanged against pieces of paper, like bank-notes, become measured as to their value withnut regard to the cost of pro-duction of the money itself, and similarly, when the commodities exchange for coin. In short, the value of a commodity depends on supply and denand and, if anything, it is the value of the commodity that measures the value of M. (of whatever kind), and not vice versa. On the controversy whether money has price as well as value, or whether the term 'nrice' should be reserved to express the value of all other things in terms of M., Mr. Walker says, and rightly as it would seem, that the latter pro-position is only true so long as one article only is used as M. But since both gold and silver are used in most countries, have separate sources of supply, and to some extent fulfil independent purposes, e.g. in the fashioning of objects of art, there must necessarily be a gold-price of silver and a silver-price of gold. In this context we see the situation that prov. and 35 m. S. of the city of bimctallist have to meet, and why Lugo, Galicia, Spain. It has manufatheir endeavon; is to extinguish all of linen, soap, and chocolate. Popper preference for either of these metals. at a legally fixed ratio, e.g. 151 of Monge, Gaspard (1746-1818), a silver to 1 of gold, so that the prices French mathematician and physicist,

Inquiry 1844 Money and the Mechanism of Exchange; Goschen's Foreign Ex-changes; Professor Walker's Money; Money in ils Relations to Trade and Industry; and Political Economy.

Moneylender. With certain exceptions any one who acts as a M. must: (a) Register his name and address or addresses; (b) carry on his husiness only in his registered name and at his registered address or addresses; and (c) supply the horrower on request and on tender of expenses copies of all documents relating to the loan. Non-compliance with these statutory requirements (Moneylenders Act, 1900) renders a M. liable to fine, and, on a second conviction, to imprisonment with hard labour. The exceptions are banks, registered friendly societies (q.v.). pawnhrokers, bullding sncieties, insurance offices, and, indeed, any business the principal object of which is not the lending of money. In the popular imagination, the M. is anathema, but a hurrnwer who, not being an infant (see INFANCY), enters Into a moncylending transaction with his eyes open, must not expect that he will necessarily get the sympathy of a court of law. The Act of 1900 merely provides that a court may reopen a transaction and relieve the borrower from the necessity of paying more than a certain sum for interest, fines, expenses, premiums, renewals, or other incidental items, where the transaction is ' harsh and unconscionable or the interest, etc., excessive, having repard to the M.'s risk and all the circumstances of the case. It is, perhaps, hardly necessary to say that a borrnwer could always count on getting relief or avoiding a trans-action altogether if induced to enter into it by a false or fraudulent mis-statement or dishonest concealment

liable also to criminal proceedings. Money Wort, or Lysimachia num-mularia, a creeping plant (order Prinmlacem) with opposite shiny leaves bearing in the axils cup-

of material facts on the part of the

M., and indeed a M. so acting is

Shaped, yellow flowers.

Monfestino, a com. in the prov.
and 20 m. S. of the tn. of Modena, Pop. 5985. Italy.

Monforte de Lémos, a tn. In the prov. and 35 m. S. of the city of Lugo, Galicia, Spain. It has manufs.

he accompanied Napoleon I. to

Egypt in 1798. Mongolia ('the country of the Mongols') embraces a vast extent of country in the interior of Asia, between 38° and 53° N. lat., 84° and 124° E. long. Its length from E. to W. exceeds 1700 m. and its width from N. to S. 1000 m. Area between 1,200,000 and 1,300,000 sq. m. Bounded N. by Siberia, E. by Manchuria, S. by China proper, and W. by Kansn. The central portion is occupied by the Great Gobi, a vast tract of sand, small stones, and sparse vegetation. country to the S.E. of the elevated and terminate

mountain range, whiel near the Hoang-ho, runs ... then turns at right angles to the E., whence under the name of the Inshan whence under the name of the Inshan Mts. it extends for some 600 m. nutil it turns N. again. The district S. of the Inshan Mts. coutains fertile valleys, but farther W., where it is surrounded by the great northorn bend of the Hoang-ho, it is again either arid like the Gohl or only fit for pasture ground. The eastern part, extending nearly to the Vellow See extending nearly to the Yellow Sea, contains to the S. of the Leah-ho numerous meadows of rich grass, and agriculture was early introduced there by the Chinese. The slopes of the Kingkhan Mts., a spur of which extends in a south-easterly direction to the Hoang-hai, are well watered and in the southern part overgrown with pine, fir, oak, lime, and walnut trees. North-western M. is also well watered but poorly wooded; near the boundary between M. and Siberia the country rises into the Altai mountain chain. Rain is rare except near the great mountain ranges. The wealth of the Mongols consists in their great herds of horses and sheep and, in tho hilly tracts, of eattle. From time immemorial the various Mongolian tribes have lived a nomadic life and subsisted on the produce of their herds. The Mongols proper voluntarily submitted to China to avoid destruction in their unsuccessful war with the Kalmucks in 1688, which cession has resulted in some development of resources and a transport trade with China and Siberia along trade with Unina and Siberia along the great caravan routes, the chief of a bitter struggle with Timur, or white run from Kalghan and Kwei Tamerlane, a Mongol chieftain, who hwacheng to Maimalchin via Urga, and from Kalghan again through Kobdo to W. Siberia. Railways are Rollways are projected from Urga to Kiakhta (170 m.) and to Kalghan (530 m.).

born at Beaune. He invented the Urga is the chief centre of population method of descriptive geometry and and commerce, and here dwells the wrote a treatise on the subject Kutukhta Lama, who is the third (Géométrie Descriptive). In 1794 he highest pontiff of the Buddlulsts and founded the Ecole Polytechnique.

As leader of the scientific expedition the accommanied Nauoleon I. to covernment of China (1912), a government of China (1912), a separate department was formed for the administration of M. and Tibet. The Russo-Mongolian agreement of 1912 was the result of a series of reresult of a series of result of a series of revolutions consequent on excessive Chinese interference. Pop. 2,600,000. Mongolo-Tartar, see URAL-ALTAIC. Mongols, The, a people of Central Asia, living chiefly in Mengolia, who

Asia, ilving enteny in Mengolia, who hina energe into history with the coming The of Genghis Khan. He was busy conquering in the E. from 1206-27, and mall it was his genius which for a time Tho built up the fabric of a great Mon-At his death he divided

between his sons, Ogetai country between the ke Baikal; Jagatai, the country between Bokhara, the Irtish and Gobi: Tuli, the land S. of the Baikal; and his grandsons Orda and Batu, Kliwarezni, the region drained Batu, Kliwarezni, the region dramed by the Jaxartes, Ural, and Oxus. Ogotai, with the help of Tuli, became emperor of China and put an end to the Kin and Sung dynasties (1234). Batu, after occupying Russia, seized the Hingarian cities of Pesth and Gran (1241), and in 1236 Mongolian traces corpus (Google and Amenia. troops overran Georgia and Armenia. Hulagu, Tuli's son, defeated the Persian assassins, ernshed the caliphate of Bagdad, and took possession of Syria, together with Alcoppo and Damaseus, whilst the great Kublai Khan, another of Tuli's sons, established a line of emperors in China, which lested from about 1275 to the final expulsion of his race in 1368. Meanwhile, the M., or, to give them a more generio name, the Tartars, were establishing (about the year 1224) the Kipchak empire in South-Eastern Russia under Batu. The khanates of Astrakhan, the Crimea, and Kazan, and in Turkestan the khanates of Bokhara and Samareand were all held by M. Though the phate of Bagdad, and took possession were all held by M. Though power of the Golden Horde Though the Western Kipchaks waned, that the White Horde or Eastern Kip-chaks—the inheritance of Orda, chaks—the inheritance of Orda, Batu's brother—grew apace and in 1378 Toktanish, an Eastern Kipchak, became ruler of both hordes. But he had no sconer completed his Russian conquests than he was plunged into a bitter struggle with Timur, or

est species is the Egyptian Iohneu-The common Indian M. is tawny or grey in colour, and nhout 17 in. loug, excluding the tail, which is nhout 14 in. long. It is very vorn-clous, and fights and kills even large mnd poisonous snakes with the utmost agility and daring, and for this service has been introduced into the W. Indies and other countries. It is readily tamed and makes a delightful though miselievous pet. Observers do not confirm the popular notion that the M. visits certain plants to counteract the effects of poisonous snake bites, which indeed are as fatal to it as to other mimals. Monica (332-87) was the mother of St. Augustine. She was the wife of

Patricius, n pagnn citizen of Tagastc. and converted both her husband and

son to Christianity.

Monifieth, a par. of Forfarshire, Scotland, on the Firth of Tny, 6 m. E. by N. of Dundee, has iron-foundries, and manufs. jute and machinery. Pop. (1911) 13,146.

Moniquira, a tn. of Boyaca, Co-lombla, on the Moniquira R., 100 m. N.N.E. of Bogota, in n rich copper-nining dist. Pop. 12,000.

Monism, a system in philosophy wholnsm, a system in philosophy which attempts to reduce the universe to a single principle. M. is thus directly opposed to dualism or monadism (pluralism). M. tends to reduce the universe either to a material principle, thus developing into a form of materialism, or into n mental principle, thus developing into idealism. Sometimes, however, a reconcillation between the dualism of matter and mind is sought, and these opposing principles are regarded as complementary aspects of a single substance. The early Greek Ionian philosophers were Monists, postulating the several elements as the material cause. Thales took wnter as the first principle; Anaximander, cloud; Anaximenes, air; and Heracleitus, fire. A great advance was made by the Eleatic philosopher, Parmenides, who invented the epigrammatic formulathe ent (or) is, the nonent (un or) is not,' thus distinguishing between the One which is, and the Many which become and are not. This theory was supported by Zeno, who disproved plurality by his paradoxes of space, time, and number. In the Stoic schools of Greek philosophy, M. was a fundamental theory. M. has been conspicuous in several modern philosophic systems. Spinoza postulated single underlying substance of which matter and mind in equipoise are the two aspects. The M. of are the two aspects. The M. of boons. Ms. are arboreal in habit, and Haeckel is essentially materialistic, are rarely found inway from the Hegol is the most distinguished warmer parts of Africa, Asia, and

especially India and Africa. The larg-, modern philosopher of the idealistic He explains matter, inschool. dividuality, sensation, and will as forms of thought. Schopenhauer and von Hnrtmann merge all finite existeneo in the cosmic will.

Moniteur, Le, a daily French paper. It was established in 1789 as the Gazette nationale on le Meniteur universel by Panckoucke. Under Napeleon it became the official organ of the government—a position which it held till 1869, when it was superseded by the Journal officiel. In 1875 it reflected the aims of MacMahon's gevernment, and it was afterwards Orleanist and Conservative in ten-

deney. Monitor, the name for a number of liznrds which include some of ths largest forms. They are widely distributed throughout the eastern hemisphero, and their habitat varies from dry sandy spots far away from the water to the marshy banks of rivers. The Nile Monitor (Varanus miloicius) is nbout 6 ft. long, with a long head and small rounded nostrils. An even larger species is the Ocellated M. of China and Siam. It preys en birds and smaller lizards, and if at-tacked, defends itself fiercely.

Monitor, a famous American battle-ship, built by Erlesson, which on Mar. 9, 1862, defeated the formidable Mar. 9, 1802, deceated the June Marrimae in Hampton roads. The essential and original feature was a circular turret, protected with 8 in. of iron, and revolving by steam on a central spindle. Two 11-in. smooth-

navy to the Royal Sovereign, etc. The Moniter sank in a hurricane off Capc Hatteras.

Monk, see Monasticism, Monas TERY.

Monk, Geerge, Duke of Albemarle, see Monck

Monk, Maria (c. 1817-50), a woman of bad character who published Awful Disclosures of Maria Monk in 1836 in New York, in which she alleged that she had escaped frem the Montreal nunnery of the Hotel Dieu. The book had a huge sale. She was eventually exposed and her story proved to be false.

Monk-Bretton, a par, and tn. in the W. Riding of Yorkshire, England, 2 m. N.E. of Barnsley; has remains of a Cluniac priory, founded in 1157. Pop. (1911) 4783.

Monkey, an unscientific name usu-nlly applied to primates excluding mnn, the anthropoid apes, the marmosets, and also, as n rule, the ba-boons. Ms. are arboreal in habit, and difference hetween those of the Old World and those of the Now World. An important distinction is in the division between the nostrils, which is invariably broad in New World Ms., while the nostrils open almost sideways. In the Old World Ms. the division is thin and the openings of the No New nostrils tend downwards. World Ms. havo cheek-pouches, and the thumbs differ less from the other fingers; but of Old World Ms. some have cheek-pouches, and others are without them. Most have a laryngeal or air pouch, and these are rare in the American genera. But in many of these prehensile tails are highly speoialised, though in some the tails are short or feeble. All Old World Ms. have the ischial callosities or pads,

where the isomal callosities or pads, where the animal sits; these are always absent from the New World Ms. Monkey Puzzle (Araucaria imbricalar), a hirdy evergreen conifer, native of Chile, and varying from a few feet to 1.50 ft. in height. There is a variety with golden-tinted foliage.

Monkey werene

Monkey-wrench, a screw-key spanner which has a movable jaw, adjustable hy a screw or wedge to the exact size of the nut it is desired to turn.

Monk-fish, see ANGEL-FISH. Monkhouse, William Cosmo (1840-1901), an English poet and art critic, born in London. His working life was spent in the offices of the Board of Trade, where he rose to assistantsecretary in the financial department. His posms include Corn and Poppies, 1890; the Dead March, and The Christ upon the Hill, 1895. As an art critle his independence is established by his Life of Turner, 1879; The Italian Pre-Raphaelites, 1887; Leigh

Italia: Fre-Haphaelites, 1887; Leigh Hunt, 1887, and British Contemporary Artists, 1899.

Morkland, New and Old, two adjoining parishes in N.E. Lanarkshire, Scotland, 1½ m. N.N.W. of Airdrie, with coal and iron mines. Pop. (1911) (Old N.) 61,029, (New M.) 38,116.

Mork Seal (Monachus albicenter), truescal common in the Mediter.

a true scal, common in the Mediterranean and on account of its tractability s easily trained to perform tricks.

Monishood, see Aconitum. Monistown, a par. and vil. in the co. anc 7 m. S.E. of the city of Cork, ol Cork Harbour, is a popular sea-batling resort. Pop. (1911) 2200.

Monkswell, Robert Porrett Collier, first Biron (1817-86), an English indge, vas called to the bar in 1843. In 1852 he was returned to parliament as a liberal hy Plymouth, his native cty. Created attornoy-general

America. There are many points of later was appointed under Gladstone to the judicial committee of the privy He was oreated a haron in conneil. 1885.

Monkwearmouth, a par. in Durham eo., England, partly in the borough of Sunderland.

Monmouth: 1. A mnnicipal and (in conjunction with Newport and Usk), parl. hor. and co. tn. of Monmouthshire, England, at the confluence of the Monnow and the Wye, 17 m. S. of Hereford. It has smelting 17 m. S. of Hereford. It has smelting and tin-plate works. Pop. (1911) 5269. 2. A city and the co. seat of Warren eo., Illinois, U.S.A., 27 m. E.N.E. of Burlington (Iowa); has manufs. of ploughs, pottery, soap, and oigars. It is the centre of a coalmining and horse-breeding district. Pop. (1910) 9128.

Monmouth, a British armoured cruiser, which was launched at Glasgow in 1901. It has a length of 440 ft., a displacement of 9800 tons.

and a speed of 221 knots.

Monmouth, James Scott, Duke of (1649-85), a leader of a rehellion against James II., was the natural son of Charles II., or probably Colonel Robert Sidney, by Lucy Walters. The king loved the boy, and put him in the hands of Lord Crofts, and afterwards of the queen-dowager. In 1663 he was made Duke of Monmouth, and two years later, on his marriage with the wealthy Scottish helress, Anne of Bucclench, was granted the dukedom also of Bnccleuch. In 1673 he hecame captain-general of the forces. His beauty and engaging manner, clemency towards the Covenanters at Bothwell Bridge (1679), his almost royal progresses through the W. and N.W. of England, and above all his Protestantism, a point in his favour of which Shaftesbury made full use, secured him a wide popularity. Yet when, yielding to Argyll's persuasion, he landed at Lyme Regis to raise an insurrection against James II., his appeal met with faint response. His undisciplined forces were hopclessly routed at Sedgmoor (1685), and nine days later he was beheaded (in a bungling manner) on Tower Hill.

Monmouth Beach, a summer resort of Monmouth co., New Jersey, U.S.A., on the Atlantic coast, 3 m. N. of

Long Branch.

Monmouthshire, a maritime English co. lying on the Welsh border with a coast-line of 22 m. along the estuary of the Severn and that part of the Bristol Channel that lies hetween the Wye and the Runney. The coast is exposed to remarkably high spring tides, which rush up the Severn in a 'bore' from the Bristol in 1863, he successfully engineered a Channel, rising at Chepstow some-hankruptcy bill in 1869, and two years times to 60 ft. The southern part

E. and W. of the Usk comprises the was evolved. The 'nun's fiddle' was Caldeeot and Wentloog levels, which are protected from the sea by sea-N. of the Caldecot Level, between the Usk and Wye, the surface is undulating, rising here and there into bold bluffs and varied by knolls and which have rendored county famous for its scenery, set off as it is by mountains to the N. and W., primitivo churches, ruins of old as Chepstow,

eastles, and such as iins. Tintern Abbey and the Cistereian About 4 m. abbey at Llanthony. from Abergavenny is the remarkable peaked mountain called Pen-y-Val or Sugar Loaf (1856 ft.). Chief rivers: Wyo, Usk, Rumney, Ebbw, Avon-Llwyd, and Munmow, the two first being famous for salmon and trout fishing. The Crumlin Canal branches from the canal connecting Newport with Brecon, at a point between Newport and Malpas, and skirts the Ebbw to Crumlin. The county is rich in coal, and mining is the chief industry. There are numerous iron works, and

plentiful in the vales of the Usk and Wye and in the N. and E. Newport, the chief port, is connected by canals with the mining centres. M. is divided into six hundreds and three parliamentary divisions, each returning one member. Area 618 sq. m. Pop. (1911) 414,730.

Monoceros, the Unicorn, a constellation to the S. of Gennini. Meridional centre, R.A. 7 h. 0 m.; deel. - 3°. In the Milky the nal

contair stars;

sively, both

for use in t

(triple); 11, quadruple. R.W., algori variable; per. 1.9 d.

Monochætum, a genus of evergreen flowering shrubs (order Melastomaceæ) bearing large panieles of rose, red, mauve, or purple flowers.

Monochlamydeæ, a sub-olass of Dieotyledons or exogenous flowering plants characterised by the absence of the corolla from the perianth, though this feature occurs in numer ous other plants, e.o. marsh marigold. If the perianth is complete, consisting sof both calyx and corolla, the flower france, and was appointed director is diehlamydeous, and if both are absent, as in the common ash, it is achiamydeous. achlamydeous.

Monochord, an appliance invented by Pythagoras for studying musical intervals by nicans of a niovable bridge under a single string stretched it the musical instrument of the same (e.g. hazel) on which the sto inlinate name, a sort of one-stringed guitar, and carpellate flowers are borno over a sound-board by a weight. From

also derived; and the elavichord was an application of the same principle, manipulated by a keyboard.

Monoclinal Strata are strata which from a horizontal or gently inclined position suddenly bend abruptly and then immediately resume their pre-vious disposition. The most notable English example of such is in the Isle of Wight, but the structure is greatly developed in the western states of

America. Monocotyledon, a plant with one ectyledon or seed leaf (e.g. wheat), as distinguished from a Dicotyledon (e.g. bean). This distinction is the main basis of two great divisions of the Angiosperms, the group which comprises the majority of all flowering plants. In the M. the radicle or rudinientary leaf usually remains undeveloped, but throws out roots from its erown. In the Didotyledon, it usually elongates and forms a primary leaf. The stem of Ms. has no central pith or separ

of the periar as a rule, th recognised

icaves are parallel veined except in a very few cases, notably the black bryony, arum, and herb-Paris. Ms. are separated into three main divislons: (1) ranged on atly m): enclosed by (2) Petaloidie, with petaloid plemanth

(e.g. lily or daffodil); (3) Glurnifere, perianth absent and flowers before in spikelets in the axils of scales or glumes (e.g. sedges or grasses).

102-56), a French
corn in Coppen
the parish and
founded a Protestant church in Naples, of which he

cessant enured in Aspies, of which he was pastor until he went to Lyons in 1827. He was professor in the theological college of Montauban in 1836, whence he removed to Paris in 1847 to preach at the Oratorie. He published various volumes of sergnons, one of which, La Crédulité de l'incrédule appeared in 1844

crédule, appeared in 1844.

where he became professor, which ho held till 1904. Founded the Revue Historique (q.v.) in 1876, Monodon-Monoceros (Sea Usaicorn),

see NARWHAL.

Monœcious, a term given te plants

separately, as distinct from directions in the 5th century as a reaction plants, on which the flowers are en-lagainst Nestorianism, teaching that tirely of one sex or of the other.

Monogenism, tho generally accepted theory in ethnology (q.v.) which regards man as having sprung from one primary form, as opposed to polygenistic views. Monogenists may be divided into three schools: (1) Adamitic, which accepts the Mosaic doctrine literally, with a measure of ovolution to explain the existing varieties; (2) Rational, which applies evolution and biological laws generally to man as to other organisms; and (3) Intermediate, which tries to harmonise the first two.

Monogram (Gk. µovos, sole, and γράμμα, a letter), a cipher or character formed by an interlacing of letters and intended as an abbreviation of a name. Ms. were not uncommon on Greek and Roman coins, and also appear on A. S. coins, especially those of King Alfred, and upon seals. In later times Ms. were often used by printers and engravers on the title pages of books.

Monograph, a term applied to the exhaustive and detailed treatment of a single portion or branch of any art or science. The word is limited somewhat to books of moderate dimension.

Monomania, a form of insanity in which the mind is diseased in one faculty or associated faculties; term manla refers to a more widely spread infirmity. M. may be classed: of fear, pride, vanity, suspicion, kleptomania (q.v.), dipsomania (q.v.), etc. The other faculties of the mind generally appear healthy, and the disease may only show itself occasionally, or in certain circumstances, or probably only at some period of life. It does not show the profound depression of melancholia, though it often follows on that form of mania; it is probably a settled form, and is seldom cured. The sufferer may suffer bittle in physical health, but Ms. of the same kind are generally accompanied by the same obvious structural fault. Thus samo physical structural fault. disease of the beart is associated with M. of fear of death; that of pride and ambition with goneral paralysis accompanying mental infirmity; that of suspicion with cancer and malignant tumours.

Monongahela: 1. A riv. of U.S.A., in Virginia and Pennsylvania. It is a rib. of the Allegheny, which it is a trib. of the Allegheny, which it joins at Pittsburg to form the Ohio R., and is navigable as far as Morgantown, ength 300 m. 2. A city on the monongahela R., in Washington eo., unsylvania, U.S.A., 23 m. S. of the colling of coal in coal, and the mining of coal is in coal, and the mining of coal is

rincipal industry. Pop. (1910) nophysites, a heresy which arose

decisions caused a great schism. Nearly the whole of Egypt refused to accept the decisions of Chalcedon, and has remained beretical to the present time. Monoplane, see AERONAUTICS. Monopoli, a tn. in the prov. and 25 m. S.E. of the city of Bari, Italy, on the Adriatic. It has a cathedral and a fortress built in 1552. It exports wine and olive oil, and manufs. woollen and cotton goods. Pop. 22,545,

Monopolies. The term M. literally means single or sole selling, and is so used in Aristotle's Politica, where a monopolist signified one who bought up the whole of a commodity so as to be the solo holder of it, and have the power of selling it at his own price. In this specialised sense it is clearly the same thing as a modern trust or combination to 'corner' an article. This is the root-principle of all M. at all periods, though it may not be in accordance with the precision of economic language to speak of the owner of urban rents as being in the enjoyment of the sole right to sell tenancles, or a railway company of the exclusive right to sell transit or travelling facilities. Again, though the effect of all M. is the same in point of exclusive right of commercial dealing, modern writers always distinguish between natural and artificial or legal M., a distinction detailed below.

In Christ there was but 'one nature.

Its effect was to deny the humanity of Jesus. It was anothematised at the

Council of Chalcedon (451), but the

Most ancient and civilised legal systems have endcavoured in one way or another, however ineffectually, to put some kind of a veto on M. e.g. the code of Zeno punished the monopolist hy confiscating his goods and sending him into perpetual exile. In England legislation against M. goes back to the reign of Elizabeth, and so great was the abuse of the royal power of granting M. that in 1639, after quarrels between parliament and the king, they were finally abolished by statute. The problem in England was always aggravated by the conflict between pubbic utility and tho andent prerogative of the crown (see Crown) to regulate all matters of trade. The privileges and crebicing rights of trade granted for exclusive rights of trade granted for a pocuniary consideration to mer-ehants by the Norman kings, and abused by later monarchs (especially the Stnarts, who used them as convenient lovers of political favouritism) furnish the most obvious example of the artificial or logal M., or M. which does not arise from the free play of economic forces. It was against

England was always directed, but with the advance in social ideas it has become increasingly clearer that the cvils of natural M. — i.e. where a variety of circumstances of economic significance combines to nullify the ordinary effects of competition, and to concentrate oxclusive rights in the to concentrate exclusive rights in the hands of the few—are hardly less apparent, with the result that modern Liberal legislation has been active in securing, or endeavouring to secure, M. values to the community partly by facilitating the municipalisation of certain activities (see Monicipal, and partly by exprendiction TRADE), and partly by expropriation coupled with compensation. Queen coupled with compensation. Queen Elizabeth frequently granted M. to her favourites for dealing in the universal necessaries of life, e.g. coal, salt, vinegar, and leather; but it was not till the last year of her reign that a bill, introduced by Lawrence Hyde, received such great support from an otherwise pusillanimous House that the queen was obliged to yield. Yet notwithstanding her concessions notwithstanding her concessions, many M. still existed or were newly many M. still existed or were newly granted. Prior to these concessions the matter came before the courts (The Case of Monopolies), which were disposed to declare M. void on the common law ground that they were in restraint of trade, for in the above case (royal grant of sole right to sell playing cards) it was said that every M. had three inseparable incidents—the raising of the price, the deterioration of the commodity, and the imthe raising of the price, the deteriora-tion of the commodity, and the im-poverishment of workers and others. The only exception which the courts were inclined to make was in favour of the royal grant of letters patent for the exclusive privilege of trading in things introduced or invented by the grantee himself, or where the grant was apparently boneficial to the community. The Act of 1622, however, declared all M. vold except those granted by letters patent for the those granted by letters patent for the solo working, for fourteen years, of any new manufacture to the 'true and first invontor thereof,' and this statutory provision is still the foundational of the solo working the statutory provision is still the foundational of the solo working the statutory provision is still the foundational of the solo working the solo wore working the solo working the solo working the solo working the tion of the present law as to patents for inventions. Finally, in 1639, as a result of the ineffectiveness of the result of the ineffectiveness of the above Act to check the royal grant of M. to corporations, all legal M. (except patents for inventions) wore abolished. Analogous to patents for inventions is the M. conferred by copyright, a right which has recently been considerably strengthened (see COPYRIGHT) in favour of authors, and, as some think, to the detriment of the community.

the community.

If in the past England has not been immune from the evils of legal immune from the evils of legal instance, an English High Court M., she has at least been free from judgo gets high remuneration, in-

artificial M. that past legislation in one notoriously oppressive form of artificial M.—that of the revenue-farmers or middle-men to whom in artheial M.—that of the revenue-farmers or middle-men to whom in various countries at various periods was leased, in return for a fixed sum, the right of collecting for their own use certain of the ordinary taxes. The system provailed in ancient Rome, with the result that the Roman capitalists who obtained the M. of levying both the domain revenues and the indirect taxes gained most extensive advantages at the expense of the general body of taxpayers. Later, when the province of Asia fell to the Romans, C. Gracchus enacted that the most excribitant direct and indirect taxes should be put up to auction for that province as a whole, the consequence being the rise of an association of capitalists of colossal magnitude (Monumsen, Hist. of Rome). In its way no less oppressive was the magnitude (Monimsen, Hist. of Rome). In its way no less oppressive was the M. under the old monarchical régime of France, by which the 'farmersgeneral' obtained from the government, in return for a fixed payment into the treasury, the right of collecting certain branches of the revenue. After the various farmers-

ment, in return for a fixed payment into the treasury, the right of collecting certain branches of the revenue. After the various farmers general had combined into a united association they became such an intolerable source of oppression that it is not to be wondered at that the rovolutionaries not only abolished them once and for all in 1794, but executed some thirty of them.

Natural M. are divided into three classes by Professor Hobhouse (Liberalism): (1) Land M.; (2) M. value from industries in which competition is inapplicable, e.g. gas and water supply, tramway service, etc.; and (3) state M., e.g. the licence to deal in intoxicating liquors (see Licensing Laws). To this classification might be added those partial M. noticed by Mill, where a kind of M. price in the shape of 'superiority of reward' is obtained by workers in trades or professions where an uncommon degree of integrity is requisite, or a high degree of confidence reposed in the workers, e.g. goldsmiths, physicians, lawyers, etc. But though academically in accordance with the principle of natural M., this last class of M. merits no further notice, because, obviously, there is no limit to the cnumeration of those avocations or trades where a partial or quasi-M. is confessed by certain matters peculiar to the occupation itself. Mill's assertion that the superiority of roward 'is not the consequence of competition but of its absence 'Is only a paradoxical way of saying that the demand is great but the supply small. To take another instance, an English High Court judge gets high remuneration, in-

spires public confidence, and has sphere of municipal trade (q,v.) usually attained his elevation to the Novertheless, the anti-Socialist and keenest.

In regard to land M., it has been shown above (see LIBERALISM) that no theory of liberty could be satisfied with the existing system under which highly civilised community enables the owner to exact his own price regardless of the absence of any effort of his own to make the land valuable (see also INCREMENT VALUE). Competition truly fails where there is no check upon the owner apart from the limitation of demand. Over and above the average wages and profits he can extract from the necessitles of others a surplus, to which the name of economic ront is given.' (As to how far land nationalisers have gone in politics to mitigate this inequality, see increment Value, Land, Land, Land, Land, Professor Hohouse, as an apologist of latter-day Liberalism, which in some of its measures is indistinguishable from some of the most definitely formulated proposals of Socialists, ingeniously argues from such positions as that (1) competition in gas and water supply and tramway services is wasteful sible, and t the remedy (

public contr tion of licensed premises ought to be so arranged that the M. value returns so arranged that the M. value returns to the community; that an individual-lsm which so 'works in harmony with Socialism' is still thoroughly consistent with itself. But it would seem that once the principle is admitted of analysing value into that which is made hy the community and that which is the product of individual effect, it can have no other logical consequence than that of comprehending all species of property what hending all species of property whatsoever, and further of assigning to the individual's efforts their only truo economic value, which, without the general co-operation of society, is next to nothing. But however serious a blow modern Liboralism or tentative Socialistic legislation has dealt to private M. and individualism, a still more serious blow, in the opinion of ant-eaters. The young ano hatched anti-Socialists, is threatened by the from eggs and are fed on milk secreted mere substitution of a state M., and not by mamme, but on a hare patch of

is a moro

bench only after a strenuous forcasic anti-municipal trader finds himself career; hut though there are few perconfronted by the dilemma of the sons in proportion to population who trust, or hugo combination of capiare qualified to assume the dignity, tal, whether national in operation or the competition among the few for intercational, which is designed to the occasional vacancies is of the very secure control of a trade or manufacture with the double object of economy in production and arbitrary profits. In this context the apologists of latter-day Liberalism may be justified in advocating a tentative Socialproperty is held, and the land years ism is the shape of state or municipal ago offered the most ohvious point of control as something far less in-attack to the Cohdenites. The neces-jurious to orthodox individualism sarily limited supply of land in a highly civilised community enables clearly demonstrated in the U.S.A. to he fatal to individualism; and it seems an inadequate argument to say that the gross ahuses of power which have characterised the American trusts are not possible in the United Kingdom. The very justifiable com-mentary on this dilemma is that if the trend of public opinion is in favour of controlling trusts and fos-tering the municipal M., it is at least probable that the public gains by the application of profits to public uses.

Monor, a tn. of Hungary, in the co. and 20 m. S.E. of the city of Budapest. Pop. 9000.

Mono Railway, see RAILWAYS.
Monotheism (Gk. wéres, only, and
ess, God), the belief in one only God
as tho ruler of the universe. Whereas Deism has come to mean a belief in one God accompanied by a rejection not so with

associated hold that

velation teaches that primitive man as monotheistic. The Jewish and ohammedan religions are strictly so. Anti-Trinitarians insist that the doctrine of the Trinity prevents Christi-

anity from being monotheistic, though

the creeds lay much stress on M. Monotheletes, or Monothelites (Gk. μονοθεληται), holders of a heresy which arose in the 6th century and which was condemned at the Sixth General Council. The M. taught that Christ had but one will, whereas the Catholics held that though Christ's personality was one, yet He had two wills, which were, however, always in perfect harmony. For full particulars of the conflicts of the 7th century,

Catholic Encyclopædia.

see article 'Monothelitism

Monotremata, an order or suh-class of mammals, and containing only three species, the Ornithorhynchus and the Echidna and Præchidna, spiny nowhere more ohviously than in the the mother's skin. They have features

which seem to make them inter-idirection of Jefferson. In 1780 he was mediate between reptiles and the higher mammals (see Mammals).

Monotype. see Type - setting

MACHINES.

Monovar, a tn. in the prov. and 18 m. N.W. of the tn. of Alicante, Spain. It has a large trade in wine and fruit, and manuis. woollen and cotton goods, leather, soap, spirits. Pop. 11,000.

Monreale, a city in the prov. and 5 m.S.W. of the city of Palermo, Sicily. It is an archiepiseopal sec, and its fine cathedral dates from the 12th century. It has a large trade in corn, oil. fruit, The massacre known an Vespers' (1282) and almonds. Sicilian began on the road between Monreale

and Palermo. Pop. 24,000. Monro, Alexander (1697-1767), Scottish physician and founder of the medical school of Edinhurgh, born in London, and studied atLoyden under Boerhave. In 1720 he was appointed professor of anatomy at Edinhurgh University, a post in which his son, Alexander Monro (1733-1817), succeeded him

in 1759. m 1709.

Monroe: 1. A city and the cap. of Ouachita par., Louisiana. U.S.A., on the Ouachita R., 76 m. W. of Vioksburg, Miss. It has a large trade in cotton, and manufs. cotton compresses, cotton-seed oil, molasses, and bricks. Pop. (1910) 10,209. 2. A city and co. seat of Monroe co., Michigan, U.S.A., on the Raisin R., 2 m. from Lake Erie and 35 m. S.S.W. of Detroit. It has flour, lumber, and paper mills, canning lumber, and paper mills, canning factories, furniture and hox factories, nactories, furniture and hox factories, and extensive nurseries. Pop. (1910) 6893. 3. A city and co. scat of Green co., Wisconsin, U.S.A., 37 m. S.W. of Madison; has manufs. of dairy products, lumber, and iron goods. Pop. (1910) 4269
Monroe, James (1758-1831), fifth president of the U.S.A., son of a carpenter and mason, was born in Westmoreland co., Virginia. He was cdu-

moreland co., Virginia. He was cducated at the college of Williamsburg, but left it on the outbreak of the revolutionary war to join Washing-ton's army. He had hardly finished his education when, in 1776, he entered, as a cadet, the regiment commanded by Colonel Mercer. Soon afterwards he joined Washington's army as lieutenaut, took part in tho engagements at Harlem Heights, White Plains, and the attack on Trenton, where he was wounded. Ho then hecame a captain of infantry and aide-de-camp of Lord Stirling (1777-78), fighting at Brandywine, Germantown, and Monmouth. Ho then temporarily ahandoned a military career for law studies under the foreign polley of the U.S.A. which

nominated military commissioner for Virginia, in 1782 elected to the Virginia Legislative Assembly, and in 1783 became a member of Congress. He proposed unsuccessfully to invest Congress with power to regulate American trade with foreign nations. After three years he retired to the country for a time, where he married the daughter of Lawrence Kort-wright. In 1790 he became a senator of the U.S.A., and four years later was sent hy Washington to Paris as American plenipotentiary. His posi-tion there was a delicate one, inasmuch as American relations were strained with hoth England and France after the fall of Rohespierre. The rupture hecame complete under the presidency of John Adams, and M., who was acoused of too much partiality for the Directoire, was recalled, and censured for not having sufficiently explained and defended the new treaty signed by the U.S.A. with England. But the publication by him of the whole of his correspondence resulted in the confusion of Adams and the Federalist party, and undouhtedly influenced the election on Jefferson as president. In 1799 he was made governor of Virginia. In 1803 he was sent by Jefferson as envoy-extraordinary to negotiate the purchase of Louisiana. The next four years he was at London, where he replaced King, and in Spain, but the commercial treaty which he preserved. commercial treaty which he nego-tiated with Pinckey as to Spanish trade was not ratified by Jefferson because it did not contain a clause against impressment (q,v.). In 1808 he returned to the United States, and became in 1811 Secretary of State for Foreign Affairs, retaining this post till March 1817, where he hecame president in place of Madison. His affahility and moderation rendered him highly popular with hoth Demo-crat and Federal, and in 1820 ho only lost one vote. The chief event of his administration was the controversy over the admission of Missouri to the States at a time when the question of slavery agitated the whole country. In 1822 M. declared in his annual message that the independence of the Hispano-American ropublies, which for several years had been endeavouring to shake off the European yoke, must be maintained at any price, a declaration which has since hecomo cele-brated as the 'Monroe doctrino' (q.v.). He retired into privato life in

him to retire in 1829. Monroe Doctrine, a doctrino in the may not unjustly be summed up in coffee, palm-oil and palm-nuts, dye-the vernacular 'Hands off America.' woods, and rubber. Pop. 8000. This famous dootrine was thus

are and interests of the U.S.A. involved that the American continents, by the free and independent condition which they have assumed aud maintain, are henceforth not to be considered as subjects for colonisation hy any European power. the existing colonies With and dependencies of any European power we have not interfered, and we shall not interfere, but with the governments who have declared their independence and maintained it, and whose independence we have on great consideration and on just principle acknowledged, we could not view any interposition for the purpose of oppressing them, or controlling in any other manner their destiny, by any European power in any other light than as the manifestation of an unfriendly disposition towards the U.S.A. How far this doctrine is an integral part of international law is diffioult to say, but it has unquestionably proved a most powerful weapon for sceuring the sovereign international sceuring the sovereign international status of the different American peoples. The balance of opinion outside America (but including the opinion of Wheaton) is against the inclusion of the doctrino as a principle of international law, and the question is further complicated by the lengths to which subsequent the lengths to which subsequent American governments have at-tempted to carry the doctrine, e.g. in the celebrated controversy over boundary hetween Venezuela and British Guiana, which was finally settled by arbitration, though not until after a presidential threat from the mouth of Mr. Cleveland. Mr. F. E. Smith (International Law) says that the broad question of the right of the U.S.A. to dietate to European nations in their relations with S. American states remained unsettled, and it still remains so. There is no doubt its final establishment in the more extended sense would, in Mr. Smith's words, destroy the doetrine of equality of sovereign states, and spell the hegemony of the U.S.A. over the whole of the American eontinent. It is to be observed, too, that the doctrine has never been directly affirmed by either the Senate or the House of Representatives. See F. E. Smith's International Law (Dent & Sons), 1911;

Mons (Fiem. Bergen), cap. of the prov. of Hainault, Belgium, on the Trouille, 35 m. S.W. of Brussels. It lies in the centre of the rich coalmining district of Borinage, and manufs. woollen and cotton goods, iron products, sugar, and glass. M. stands on the site of a Roman Pop. 27,147. eamp.

Monselice, a com. of Italy, on the canal of M., 13 m. S.W. of Padua; has manufs. of textiles. Pop. 11,751.

Monserrat, or Montserrat, a monntain mass in the prov. of, and 23 m. N.W. of the city of Barcelona, Spain, on the r. b. of the Llobregat. Its highest point is 4070 ft. At a height of 2910 ft. on the E. side is the Benedictine monastory, dating from the 9th century, and containing a famous image of the Virgin.

Monsignoro, a title of honour given to prelates in the Roman Catholic

Monser, e- Pi---- 1 1834-1909), a . born at Chart entered 1856. and was appointed attaché at Paris. In 1869 he was consul in the Azores; from 1871-78 consul-general at Budapest; from 1879-84 ministor to Uru-guay; in 1884 envoy to Buenos Ayres; from 1885-85 minister to Denmark; from 1888-92 to Greece; and from 1892-93 to Belgium. From 1893-96 he was ambassador at Vienna, and from 1896-1904 at Peris. He was ereated a baronet in 1905.

Monsonia, a genus of ornamental shruhs and sub shrubs (order Geraniaceæ). M. lobata bears blue, red, white, or green flowers, and M. speciosa, rose-flowers, with a purple

eye and green exterior. Monsoon (from the Arabic mawsim, a season), a term used generally for any wind which blows regularly at fixed seasons; but also applied to those winds which blow over the Indian Ocean from Australia to India. From April till October they blow from the S.W., from October to April they blow from the N.E. Their regularity is caused by the regular change of the seasons; during the winter, the cold air from the interior of Asia flows ontward in a general south-westerly direction towards the warmer sea, when the land, on the contrary, be-eomes more heated than the sea, the direction of the current of air changes and flows inwards in a north-easterly direction. In some places the change to the S.W. monsoon is accompanied by calms, in others by variable winds, and in parts of India by violent hring the expected rains, and the result is such a famine as occurred in 1895 and again in 1899. The direction of the wind is not always the same, the S.W. mensoon being deflected to the S. and S.E. in the equatorial beit, and accompanied by violent typhoons in the neighbour-hoods of the E. Indies and Madagascar. The term monsoon was originally brought to England from the E. Indies by Portuguese traders in Elizabethan times, but accounts of the winds were chronicied by Pliny and Aristotic, as well as by the Arab historian, Sidi Ali, in 1554. See Prof. Ferrel, A Treatise on the Winds, 1889. See also WINDS.

Monster, a vil. in the prov. of S. Holland, Netherlands, 15 m. N.W. of

Rotterdam, Pop. 5784.

Monstrance (Lat. monstrare. show), or Ostensory, the instrument used in the Roman Catholic Church for holding the Sacred Host in hencdictions, processions, and expositions of the Blessed Sacrament. It stands on a circular hase, and the upper part is now almost invariably made circular, with rays extending on all sides from the centre. The Host Itself is held in a small crescent-shaped lunula, or lunctte.

Monstrelet, Enguerrand de (1390-1453), a French chronicler, prohably born in Ponthieu. Very littie is known of his life. He was attached to the of his life. He was attached to the service of John of Luxembourg, and was at Compière when Joan of Aro was captured by the Burgundians. He was provost at Cambrai, and bailiff of Walincourt (1444). His Chronique, covering the years 1400-44, continued Froissart's Chronicle, and is a clear and accurate account of current events. There is an English translation by Thomas Johns (1810), and the latest French odition is that of Douct d'Arcq (1857-62).

Monstrosity, see Teratology.
Monsummano, a tn. of Tuscany,
Italy, 15 m. E. of Lucca; has natural

vapour baths. Pop. 8527.
Montagnana, a walled tn. in tho prov. of Padua, Italy, 22 m. S.W. of Padua. It has a 15th century Gothio

cathedral. Manufs. include silk, wool, hemp, and cotton goods. Pop. 10,364.
Montagnards, or Montagnet. 1. The name given to the extreme Democratic party in the first French

in by the N.E. monsoon. It some-St. Just, and Coliot d'Herbois, the times happens that the M. fails to men of the Reign of Terror.' The name was temporarily revived in 2. A collective name given to six tribes of the northern division of the Athabascan stock of N. American Indians, occupying the interior of British N. America.

Montagu, a British hattleship, displacement 14,000 tons, launched in 1901. On May 30, 1906, during the mobilisation of the ficet, she went ashore on Lundy Island, Bristol Channel, in a thick fog, and hecame a to:al wreck.

Montagu, Charles, see HALIFAX,

EARL OF. Montagu, Edward, see Manchester.

SECOND EARL OF. Montagu, Elizabeth (née Robinson) (1720-1800), an author, married in 1742 Edward M., grandson of the first Earl of Sandwich. She was one of the best-known and most popular

and at Imong

on the Writings and Genius of Shakespeare. She was a voluminous correspondent and her Letters were collected and published (1809-13) hy her nephew, Matthew M. There is a hiography by

Mrs. Clemenson (1906).

Montagu, Lady Mary Wortley (1689-1762), an author, was a daughter of Evelyn Pierrepont, first Duke of Kingston. In 1712 she married Edward Wortley M., who four years later was sent as ambassador to the Porte. Lady Mary accompanied her husband to the E., and there learned something of the practice of inoculation for smallpox, which on her return in 1718 she introduced into this country. She lived in London for the next twenty years. Her quarrel with Popo, or rather Pope's quarrel with her, is historic. She went abread in 1739, and remained away until the death of her husband in 1761, when she came again to England. Mary's Town Eclogues were first published in 1716 under the title of Court Poems. Her Letters were given to the world in 1763, and her Works were collected in 1803.

Montague, a tn. in Franklin ce., Massachusetts, U.S.A., 72 m. W.N.W. of Beston. Pop. (1910) 6866.

Montague, Basil (1770-1851), a British lawyer and miscellaneous writer. In 1798 he was called to the har, and began to write on legal subjects, chiefly with the object of ameliorating the condition of the debtors' prison, and o of the death murder or tr edition of B

and a volume of essays.

Montague, George (1751-1815), an a third book was added, appeared in English writer on natural history, 1588. Ho died of quinsy in his horn at Lackham, Wiltshire. He château, and was buried first at entered the army and served in the war with the American colonies. He was one of the earliest members of the Linnean Society, for which he wrote papers on the birds and shells of S. England. He had a splendid collection of birds and other animals which was purchased by the British Museum. He published an *Ornitho*logical Dictionary of British Birds, 1802: and Testecea Britannica, 1803, on British shells.

Montaigne, Michel Eyquem, Seigneur de (1533-92), a French essayist, horn at the chateau of S. Michel de Montaigne, near Bordeaux. In 1539 he entered the Collège de Guienne. There he studied under George Buchanan and Marc-Antoine Muret.



He ontered upon a legal profession, and in 1555 succeeded his father as a magistrate in the Cour des Aides, becoming a city councillor two years later. But life in the law courts was later. But life in the law courts was very tedious to him, and after the death of his father (1568) he gladly retired to his estate, where he lived with his books for the remainder of his life. He had already published a translation of the Natural History of Raymond de Sebond (1567), and in 1569 he edited the literary remains of his frlend, La Boëtie. He began his Essais in 1571, and published the first two books in 1580. In the

Montaigne and later in the chapel of the Feuillants at Bordeaux. eritieism is analytic, sceptical, and inconclusive. He appeals to readers of all classes, prohably on account of his own wide spirit of toleration. As an essayist, in point of matter and form, he has had a remarkable influence on modern European literature. A new edition of his Essais was brought out hy Mile. de Gournay in 1595. ny allie. de Gournay in 1895. The chief English translations are by John Florio (1603) and Cotton (revised by Hazlitt, 1865). See Alphonse Grün, Vie Publique de Michel Montaigne, 1855; J. Feis, Shakespeare and Montaigne, 1884; Emerson, Representative Men; Dowden's Montaigne, 1905; M. E. Lowndes, Michel de Montaigne, 1898; and Edith Sichel, Michel de Montaigne, 1891; and Edith Sichel, Michel de Montaigne, 1905.

Michel de Montaigne, 1911.

Montajone, a com. in the prov. of, and 25 m. S. W. of the city of Florence,

Italy. Pop. 9,500.

Montalban, a tn. of Carabobo, Venezuela, 28 m. W.S.W. of Valencia.

Pop. 7000. Montalembert, Charles Forbes de Tryon, Count (1810-70), a French historian, horn in London, the son of a French *émigré* and his English wife. In 1830 he joined Lamennais on the staff of the Avenir, accompanying him to Rome and to Munich. He exhabited to the avenir 1828 and He suhmitted to the pope in 1835, and published his *Histoire de Ste. Elisa-*beth d'Hongroie in 1836, the first-fruits of his mediæval studies, which was followed by Du Vandalisme et du Catholicisme in 1839. After the confiscation of the Orleans property he was a fierce opponent of Louis Napoleon, whom he had at first sup-ported. Failing to he re-elected to ported. Falling to he re-re-ceed to the Legislative Assembly in 1857, he devoted himself entirely to literature. He was elected to the Academy in 1852. His great work was Les Moines d'Occident (5 vols.), 1860-67 (Eng. d'Occident (5 vols.), 1860-67 (Eng. trans., 1861-79). He also published: L'Avenir politique d'Angleterre, 1856; Le Pape et la Pologre, 1864: Mémoire de l'Abbé Lacordaire, 1863. See Life by Mrs. Oliphant (1872), De Meaux (1897), and Lecannet (1895-1901).

Montalto a tn. in the prov. of and 10 m. N.W. of the city of Cosenza, Calabria, Italy. Pop. 7000. Montalvan, Juan Perez de, see

PEREZ DE MONTALVAN.

Montana, a north-western state of or Raymond de Sevond (1307), and in 1569 he edited the literary renains the Auerican Union, bounded on the of his friend, La Boëtie. He began his Essais in 1571, and published of the American states, with a total the first two books in 1580. In the latter year he travelled abroad, and on his return was elected mayor of the American states, with a total part consists of rolling plains rising on his return was elected mayor of the American states, with a total the American states of the American states, with a total the A Bordeaux. The fifth edition, to which at the base of the Rocky Mts. in the

, Mt. Douglas (11,300 ft.) is the rubber goods, and cutlery. highest peak. The Missouri rises in Yellowstone Park in the E., and with its tributaries, the Yellowstone, Milk, Sun, Marias, Teton, and others, drains the greater part of the state, while the Clark Fork of the Columbia R. drains the N.W. corner. In the river valleys and where irrigation nver valleys and where irrigation has been extensively introduced, the soil is very productive, and grazing is important. The great industry of the state is mining, with the smelting of copper and lead; gold, silver, sapplines, and coal are also found. The capital is Helena (16,770); Helena (16,770); (43,624) (21,500) are the largest towns. was organised as a territory in 1864, and admitted to the Union in 1889. Pop. (1910) 376,053.

Montanism, a heretical movement of the 2nd century. Montanus, its leader, was a native of Mysia, and the movement took its rise at a town of Phrygia. Montanus conceived that he had a mission to hriug the Church hack to a state of strictness and purity, but his great claim was to he the Paraelete promised by Jesus to his disciples. He taught that revelations to man still continued, and these were frequently delivered by himself and by his female com-panions, Prisca and Maximilla. He proclaimed that the end of the world was at hand, and that then Christ would reappear at the town of Pepuza in Syria. To awalt this eveut a large community gathered round him there. M. was strict and most ascetle. No forgiveness was possible after mortal sin, the sacraments were therefore unpressure. discouraged as an inferior state. At first the sect spread rapidly and made its most famous convert in Africa, where Tertullian joined its ranks. It was condemned unhesitatingly in several local councils, and finally in the Council of Constantinople (381). It died out in the West about the 4th century, and did not survive much longer in the East. See Bon-(1881), aud works on Christian dogma.

Montanoa, a genus of shrubs (order Compositæ), bearing corymbose panicles of white, pink, or yellow M. bipinnatifida is halfflowers.

hardy. Montargis, a tn. in the dept. of Loiret, France, at the junction of three canals connecting the Seinc and the Loire, 40 m. E.N.E. of Orleans. A bronze menument companying the cambet between Orleans. A bronze moument combet between Montargis' dog and Macaire, the murder of Montargis in 1371. It has challenged by the Canal du Centre, 25 m. W.S.W. of manufs. of paper, cotton, india-

Pop. 12,351. Montataire, a com. in the dept of Oise, France, 25 m. N.E. of Paris; has large iron foundries. Pop. 6752.

Montauban, cap. of the dept. of Tarn-et-Garonne, France, overlook-ing the Tarn R., 31 m. N. of Toulouse. It has a Renaissance cathedral, completed in 1739. It has manuis. of pleted in 1739. It has manus, or cloth, woollens, sugar, and metalware, and a largo trade in horses, grain, oil, wine, and leather. The town was founded by Count Alphonse of Toulouse in 1144, and was an episcopal sec from 1317-1560. It became a Huguenot stronghold and was constantly besigged. At the fall was constantly besieged. At the fall of La Rochelle, M. suhmitted, but its fortifications were destroyed in 1629. Pop. 28,700.

Montauban. COUSIN-MONT

AUBAN.

Montbéliard, a tn. in the dept. of Doubs, France, at the confluence of the Allaine and the Lisaine, 48 m. E.N.E. of Besancon. The castle dates from the 15th century. There is a statue to Cuvier, the naturalist, born here in 1769. The chief manufacture of the control of the control of the control of the chief manufacture. are watches and textiles. Pop. 10,500.

Mont Blanc, see BLANC, MONT.
Montbretia, a geuus of S. African
plants (order Iridacee), now incorporated in the genus Tritonia. The flowers are of great variety of yellow and red tints, and are horne on long graceful spikes. The corms are planted in March.

Montbrison, a tn. in the dept. of Loirc, France, 20 m. N.W. of St. Etienne It has mineral springs, and

Etienne It has minerai springs, aumanufs. ribhons. Pop. 7600,
Montealm, Louis Joseph, Marquis
de (1712-59), a French soldier, born
at Candiac, near Nîmes. In 1727 he
entered the army, becoming a
captain at the age of eighteen. He
served iu Italy and Germany, being
wounded at Piacenza (1746). In
1756 he was placed in command of 1756 he was placed in command of the French troops in Canada, captured Fort Ontario and Fort William Fort Ontario and Fort Henry from the English (1757), and wetsch's Geschichte des Montanismus repulsed General Abercrombie's attack at Ticonderoga (1758). Lack of re-inforcements and provisions forced him to retiro to Quebec, where he was besieged by General Wolfe and fell mortally wounded at the battle on the Heights of Abraham. In 1827 a monument to the joint honour of Wolfe and M. was erected in Quebec I Wolfe, 18 devant 18

foundries, machine-shops, spinning! and weaving factories. Pop. 28,779. Mont Cenis, see CENIS, MONT.

Mont Jenis, see CENIS, MONT.
Montelair, a tn. of Essex co., New
Jersey, U.S.A., 5 m. N.N.W. of
Newark, is a favourito residential
quarter. Pop. (1910) 21,550.
Mont-de-Marsan, a tn. of France,
cap. of the dept of Landes, at the
junction of the Midon and Douze,
64 m. S. of Bordeaux. It has manufs.
of resin and oil. Pop. (com) 12,000.

of resin and oil. Pop. (com.) 12,000. Mont-de-Pieté (It. Monte di Pieta), an establishment where money is lent to the poor at a moderato rate of interest, was founded, to combat the evils of usnry, about the middle of the 15th century at Orvieto (1463) and Perugia (1467). The first establishment in Paris was opened in 1777, suppressed during the Revolution. but later restored as a national undertaking with the right to charge 9 per cent, on all loans to pay working expenses; any surplus gain goes to public charities. See Blaize (1856) and Vaulaer (1895). See also PAWN-BROKING.

Mont-Dore-les-Bains, a watering-place in the dept. of Puy-de-Dôme, France, on the Dordogne, 26 m. S.S.W. of Clermont-Ferrand. It lies at an alt. of 3412 ft. in the Mont Dore Mts. Its hot mineral springs were known to the Romans. Pop. 2000. Montebello, a vii. in the prov. of, and 10 m. S.W. of the city of Vicenza,

Italy. The Austrians were defeated herein 1796 by General Bonaparto, and

herein 1796 by General Bonaparto, and in 1805 by the Italians under Prince Eugène de Beauharnais. Pop. 4700. Montebello Casteggio, a vii. in the prov. of, and 14 m. S.S.W. of the city of Pavia, Lombardy, Italy. The scene of two defeats of the Austrians by the French in 1800 under General Lannes, and in 1859 by the French and Piedmontese. Pop. 2200. Montebelluna, a com. in the prov. of, and 13 m. N.W. of the city of Treviso, Italy. Pop. 10,000. Monte Carlo, a in. in the princi-

Monte Carlo, a tn. in the principality of Mouaco, and 9 m. E. of Nice, overlooking the Mediterranean Sea. It is a popular winter and sea-bathing resort, on account of its beautifully laid out gardens, and delightful clime. But it is chiefly famous for its gaming establishment. The concessionaire (a joint-stock company) pays an annual grant of £50,000, rising in 1937 to £100,000. The concession expires in 1947. Pop. 3794. See Monaco. Monte Cassino Monastery

Monastery.

CASSINO. Montecatini, two watering-places in Italy: 1. In the prov. of Pisa, 7 m. W.S.W. of Volterra; has copper mines. Pop. (com.) 4560. 2 In the prov. of Lucca, 30 m. W.N.W. of Florence. Pop. 8748.

Monte Cristo, a small rocky islet off the W. coast of Italy, 28 m S. of Elba. It is 2110 ft. in height, and has been a penal settlement since 1874.

Dumas' The Count of Monte Cristo. Montecuculi, Raimondo, (1609-80), an Austrian general, horn at Modena. In 1625 he entered the Austrian army as a volunteer, serving through the Thirty Years' War. In through the Thirty Years' war. In 1657 he fought against the Swedes, and from 1660-64 against the Turks who had invaded Transylvania. In 1672, when Austria supported Holland against France, M. was in command of the imperial army and opposed Thronne in the campaign on the hanks of the Rhine (1672-75). The Emperor Leopold made him a prince of the empire, and he was made Duke of Melfi. See his Mémoires, 1703.

Montefaleo, a com. in the prov. and 22 m. S.E. of the city of Perugia.

Italy. Pop. 5709.

Montefiascone, a tn. in the prov. of Rome, Italy, 9 m. N.W. of Viterho. It occupies the site of the Etruscan Fanum Voltumne, and is famous for its muscatel wino. Pop. 9500. Montefiore, Sir Moses Hayim (1784-

1885), a Jewish philanthropist, horn at Leghorn, Italy. He became a member of the London Stock Ex-change, made a large fortune, and married Judith Cohen, a relative of the Rothschild family, in 1812. In 1818 he hecame president of the Spanish and Portuguese community, and started his strenuous endeavours to remove the civil disabilities of the Jews in England. He was High Sheriff of Kent, and in 1837 was admitted a sheriff of London, and knighted. He made several journeys to the East in his efforts to ameliorate the position of the Jews throughout the world. See Diaries of Sir Moses and Lady Montefiore (ed. Loewe, 1890).

Montefrio, a tn. in the prov. and 22 m. W.N.W. of the city of Granada, Spain, on the Bilano. Manufs. soap and cotton goods. Pop. 11,000.

Monte Generoso, a monntain on the horders of the Swiss canton of Ticino. and the Italian prov. of Como. Alt. 5590 ft. A mountain railway ascends nearly to the summit.

Monte Giorgio, a tn. in the prov. of Ascoli-Piceno, in the Marches, Italy. Pop. 7000.

Montegnée, a com. in the prov. of Liège, Belgium, has coal mines. Pop. 9000.

Montégut, Jean Baptiste Joseph Emile (1825-95), a French critic and author, horn at Limoges. Ho prac-tised law until 1847, when he entered the field of literature with an article on Emerson in the Revue des Deux Mondes, of which he became editor in 1857. In 1862 he joined the staff of

laise, 1883; and Ecrivains modernes de l'Angleierre, 1885-92, and translated the works of Shakespeare (1892), Macaulay, and Emerson.

Monteleone, a tn. in the prov. of, and 26 m. S.W. of the tn. of Cantanzaro, Calabria, Italy. The town was wrecked hy an earthquake in 1905.

Pop. 13,000.

Montelepre, a com. in the prov. and 10 m. W. of the city of Palermo,

Pop. 5718.

Montelimar (Roman Acusium), a tn. in the dept. of Drôme, France, 27 m. S.S.W. of Valence. It has manufs. of silk, cotton, bricks, tiles, It. has hats, and almond candy; coal and lignite are mined. Pop. 13,600.

Montelius, Gustaf Oscar Augustin (b. 1843), a Swedish archæologist, born at Stockholm. He became conneeted with the History Museum at Stockholm in 1863, and since 1888 has been a professor and director there. He has made a special study of the Age of Bronze, and has published several works, many of which have been translated into various languages. Some of his hooks are: The guages. Some of his hooks are: The Bronze Age in Sweden: The Civilisa-tion of Sweden in Heathen Times (English translation); The Bronze Age in Egypt (English translation); The Prehistoric Age in Sweden; Primi-tive Civilisation in Italy; Ancient Dwellings in Europe; The Bronze Age in North Germany and Scandinavia.

Montella, a com. in the prov. of, and 12 m. E.S. E. of the tn. of Avellino, Italy. Pop. 8000.

Montelupe Fiorentino, a com. in the prov. of, and 12 m. W.S.W. of the city of Florence, Tuscany, Italy, on the Arno; has manufs. of glass and pottery. Pop. 6800.

Montem, a custom of unknown origin, which need to be held triennight.

ally on Whit Tuesday at Eton. consisted of a procession of the boys, with flags and music, headed by their captain, to Salt Hill (ad montem). It is first mentioned in 1561, and the last

Montemayor, Jorge de (1520-61), a Spanish poet, born at Montemor-o-Velho, near Coimbra, Portugal. His fame rests on his unfinished pastoral romance, Diana enamorada, 1558 (English translation, 1598, by Bartholomew Young). An edition of his works appeared in 1886. See Schön-

herr's J. Montemayor, 1886. Monten, Dietrich (1799-1843), Monten, Dietrich (1799-1843), a German painter of battle subjects, born at Düsseldorf, and studied under

the Moniteur Universel. He wrote Garden there, but his fame rests L'Angleterre et ses colonies Australes, mainly on his 'Finis Polonise,' 1832, 1879; Essais sur la littératur Ang- now in the National Gallery, Berlin, laise, 1883; and Ecrivains modernes which deplots the exodus of the Poles from their country in 1831

Montenegro ('Black Mountain'), Montenegro (Diack Mountain), called by the natives Tzernagora, and by the Turks Karadagh, all three names expressive of the peculiar features of the country, is a small independent kingdom, situated between Herzegovina and Albania, and separated from the Adriatio hy the narrow strip of land known as the Circle of Cattare, in Austrian Dalmatia. It contains about 3630 sq. m., and is everywhere mountainous, the mountains being in most cases clothed with dark forests of fir, ash, heech, oak, ilex, willow, and poplar. Mt. Dormitor, in the N., is 9146 ft., and Kutsh Kom, in the E., 9300 ft. above sea-lovel. Agriculture is prosecuted to the utmost extent the country will admit of, but in an extremely rude and primitive manner. The products are those of other European countries in the same latitude. The Sumach (q.v.), one of the most valuable of the natural trees, is not uncommon. Few oxen are reared, but sheep, goats, and swine abound. Cettigne or Cettinji is the seat of government. The Monte-negrins or Tzernagorzes are Slays of the Servian race, and number about 250,000. They are knit together in clans and families, and have many fouds amongst themselves, which aro perpetnated by the hereditary obliga-tion of avenging blood. Their chief occupations at home are agriculture and fishing, hut they are over ready for war or pillage. Education among them was at a very low ehh, but is now improving. Their language is a very pure dialect of the Slavic. They belong to the Orthodox Greek Church. Political Divisions and Government.

-M. is divided into the districts of M. Proper, and Brda or Zjeta, each of these being subdivided into four 'nahies' or departments, and these are further subdivided, each subdivision having its own hereditary chief. Some islands in the lake of

Scutari also belong to M.

There is little trade in M., yot hldes, wool, venison, driod and smoked fish. mutton and goat flesh, bacon, lard, etc., are exported in considerable quantities.

History. -M. belonged in the mlddle ages to the great Servian kingdom, but after the dismemberment of the lattor, and its conquest by the Turks at the hattle of Kossovo (1389), the Montenegrins, under their prince, who was of the royal blood of Servia, Peter Hess at Munich. He was communication their independence, missioned to paint three historical though compelled to relinquish the episodes in the Areades of the Royal level tracts about Scutari, with their

chief fortress of Zahliak, and confine | San Juan, at the head of a large and themselves to the mountains (1485). In 1516, their last secular prince resigned his office, and transferred the government to the viadika. The Porte continued to assert its claim to M., and included it in the pashalik of Seutari; hut the country was not conquered tili 1714, and on the withdrawal of the Turks soon afterwards, it resumed its independence. In 1796, the Prince-bishop, Piotro I., defeated the Pasha of Scutari, who had invaded M., with the loss of 30,000 men; and for the next quarter-century we hear no more of Turkish invasions. In 1851, the last prince-hishop died, and his successor, Danilo I., separated the religious from the secular supremacy retaining the latter under the title of Gospodar. This stop caused the Czar Nicholas to withdraw his subsidy (which was renewed, and the arrears paid, by the Czar Alexander II.), and the imposition of taxes thus rendered necessary caused great confusion. This was taken advantage of hy the Turks, who, under Omer Pasna, invaded the country; but the inter-vention of the Great Powers compelled a treaty, Feh. 15, 1853. The country is now a constitutional monarchy with Nicholas I. as king. In 1912, in concert with Servia, Bulgaria, and Greece, M. declared war on Turkey, their operations being principally conducted in N.W. Albania. See BAIKAN WAR and TURKEY. For a complete history, see Stevenson's A History of Montenegro, 1913. Montenero, a com. in the prov. of Campobasso, Italy, 11 m. N.N.W. of

Larino. Pop. 6000.

Montenotte: 1. A vil. in the prov. and 26 m. W. of the city of Genoa, Italy, was the scene of Napolcon's first victory over the Austrians in 1796. 2. A tn. in the prov. of, and 109 m. W.S.W. of the tn. of Algiers, N. Africa; iron, lead, copper, and silver are found in the neighbourhood. Pop. 3340.

Montepagano, a com. in the prov. and 15 m. E. of the city of Teramo, Italy. Pop. 7000.

Montepulciano, a tn. in the prov. and 28 m. S.E. of the city of Siena, Italy, at an altitude of 2070 ft. It is famous for its wines. Pop. (com.) 15,399.

Montereale, a com. in the prov. and 14 m. N.N.W. of the tn. of Aquila, Italy. Pop. 7000.

Montereau, a tn. in the dept. of Seine-et-Marne, France, at the confluence of the Seine, and the Yonne, the confluence of the Frontsinghless. 12 m. S.E. of Fontainchleau; manufs. of porcelain, bricks, has Pop. 8200. and agricultural machinery.

beautiful valley. It is the see of the Bishop of Linares, and has a large cathedral, and a hishop's palace. There are woollen mills, hrass and iron foundries, smeltiog works, sawmills, flour-mills, hreweries, and a carriage and wagon factory. The town was founded in 1560, and chartcred as a city in 1596. In 1846 it was hesicged and taken by General Taylor at the head of the Annerican forces. In 1909 about one-fourth of the city was swept away by a flood. Pop. 81,100. 2. A city of California, U.S.A., on Montercy Bay, 90 m. S.E. of San Francisco. It is a favourite winter resort of the Pacific coast. There is good fishing, especially for salmon, and the city has sardine canneries, and large oil tanks, about 60,000 tons of oil being shipped annually. Stockraising is also a prominent industry, and sand lime brick is manufactured. It was the capital of the military gov. of California in 1847, and in 1849 the State Constitutional Convention was held here. Pop. (1910) 4923.

Monte Rosa, see Rosa, Monte. Monterosso, a tn. in the prov. and 27 m. W.N.W. of the city of Syracuse, Sielly. Pop. 6000.

Moste Sant Angelo, a tn. in the prov. and 27 m. N.E. of the city of Fogria, Italy. The Church of St. Michael is much visited by pilgrims.

Pop. 21,870.

Montespan, Françoise Athenais de Rochechouart, Marquise de (1641-1707), was the daughter of the Due de Montemart. Having become maid of nonour to the queen, she in 1668 attracted the notice of Louis XIV., who made her his mistress. She was hoth heautiful and witty, and remained the favourite of the king for many years, to whom she hore eight children. She was, however, supplanted by Madame de Maintenon in 1691, and left Vcr-sailles to retire from the world in 1700. Her Mémoires (1829) have been translated into English (1895).

Montesquieu, Charles de Secondat, Baron de la Brède et de Montesquieu (1689-1755), a French philosophical historian, horn in the château de la Brède, near Bordeaux. In 1714 he was appointed councillor of the parliament of Bordeaux, and two years later on the death of his uncle, Jean Baptiste de Secoodat, he succeeded to his title and fortune as well as to his judicial official office as president of the parliament of Bordeaux. first literary enterprise was the publication in 1721 of his Lettres Persanes, subtle satire on contemporary manners, written in the guise of a correspondence hetween two Persian noblemen travelling through Europe. Monterey: 1. A city of Mexico, cap. noblemen travelling through Europe. of the state of Nuevo Leon, on the In 1728 he published anonymously a

poem entitled Le Temple de Guide, and was admitted to the Académie three years later. After travelling for three years in foreign countries, he wrote Considerations sur les Causes de la Grandeur des Romains et de leur Décadence, 1734, a most able study of ancient Rome. In 1748 be published a monumental work, entitled nshed a monumental work, contitled L'Esprit des Lois, in thirty-oue books. The standard edition of his works is that of Laboulaye (7 vols.), 1875-79. Consult Lives by Louis Vian (1879). A. Sorel (1887), and Sir C. P. Ibert. See also A. Charaux, L'Esprit de Montesquieu, 1885.

Monteverdi, Claudio (1567 or 1568-1642).

1643), an Italian composer, born in Cromona and studied under Ingegneri: be was chiefly associated with the earliest opera house (opened 1637) at Venice, to where he bad removed in 1613. In his madrigals, church music, and operas, he laid the foundation of modern music hy breaking away from pure polyphony, and hy his freer use of extended melody. His chief operas were Orfeo, 1607; Arianna, 1608; II Rilorno d'Ulisse, 1641, and Poppea, 1642.
Monte Vergine, in Italy, see

AVELLINO. Montevideo, or Banda Oriental, the cap. of the republic of Uruguay, in S. America, is situated on the N. shoro of the estuary of the Rio de la Plata (which is bere 60 m. wido), and 132 m. E. by S. from Buenos Ayres. It stands on a small peninsula, and is surrounded by a wail and fortifications. The houses are mostly of one story, with flat roofs, which are often used as gardens. The public buildings wortby of notice are the cathedral, the university, and the town-hall. The climate is healthy; but, as there are no rivers near the town, water is scarce, and it is only obtainable from wells, or by collecting rain-water in eisterns. There are several plazas or open spaces, and a public park. The bay or harbour, which is about 3½ m. long by 2 m. broad, presents excellent facilities for building wharfs, docks, etc., is sheltered from all but the S.W. gales, and averages 16 or 17 ft. in depth. The trade of M. is extensivo; the exports consisting of wool, hides, horns, wheat, flour, corn, hay, barley, tobacco, fruit, hair, tallow, salt and preserved beef, bones, etc.; and the imports, of cott hardware, also

provisions. TI Great Britain. M. has steam com-munication with the United States, Rio Janeiro, Britain, and Genoa, and

the S. side of the city was begun, which is estimated to cost £1,500,000. The exports execed £8,000,000 and the imports £4,500,000 annually, The city was founded by the Spaniards in 1726; it became free in 1814, and in 1828 was made the cap. of the republic. Pop. 291,465. The dept. of M. has an area of 256 sq. m. Pop. 317,879.

Montez, Lola (1818-61), an adventuress, born at Limerick, of mixed descent, her father being Irish and her mother Spanish. In 1837 she eloped with Captain James, from whom she was separated in 1842. She next turned her attention to daneing, and appeared in London, Dresden, Berlin, St. Petersburg, and Paris. visiting Munich in 1846, where she attracted the attention of Louis I., who created her Countess of Landsfeld and granted her a stipend of 25000 a year. The revolution of 1848, however, forced ber to leave the 1848, however, forced ber to leave the country, and she spent the next years touring in the United States and Austrnlia. She died, n penitent, in Long Island, 1861. See her Autobiography (1858) and her Life, by E. B. D'Auvergne (1909).

Montezuma I. (c. 1390-1464), Emperor of ancient Mexico, succeeded his brother in 1436. He extended the Mexican conquest, rebuilt Tenochtitlan, the chief Aztec city, erecting houses of lime and stone on the site of the modern Mexico, and developed the ceremonial of the tribal religion.

Montezuma II. (1466-1520), Emperor of Mexico, succeeded his uncle in 1502. He was a great warrier

uncle in 1502. He was a great warrier and legislator, but his arrogance alienated the people, and when Cortez landed at Vera Cruz in 1519 and attempted to march on Tenochttian, he was well received by the inhabitauts and easily made Monte-zuma his prisoner. He was killed (1520) while still in Spanish hands when, at the request of Cortez, he was attempting, by a speech, to end

hostilities. Mentfauçon, Bernard de (1655-1741), a Benedictine of the congrega-1741), a Benedictine of the congregation of St. Maur, the son of Timoleon do M., Lord of Roquetaillade and Conillac. His first profession was military, and he served in Germany under Marshal Turenne, but in 1675 he entered the learned congregation of St. Maur. His edition of Athanasius in Greek and Latin (3 vols. fol.) established his reputation as a profound sebolar. He made a journey to Italy for the purpose of consulting the manuscripts in the Italian libraries. In this pursuit be passed three years. besides these, carries on a considerable trade with France, Spain, La and upon his return in 1702 published Plata, and Italy. In 1909 the connum necount of his journey and restruction of a new embankment on searches in his Diarium Italicum.

Among the works of this eminent Oxford. They passed statutes to enscholar, one, the hest known, is his force the provisions of Magna Charta. great work entitled L'Antiquité Expliquée et Representée en Figures (Paris, 5 vols. fol.), to which, in 1724, was added a supplement in 5 vols.

Montferrat, Duchy of, a territory hctween Piedmont, Milan, and Genoa, originally independent, hnt now forming part of the kingdom of Italy. It had an area of 1300 sq. m., and its capital was Casale. A portion of the duchy fell to the dukes of Savoy in 1631, and the remainder in 1703.

Montlleury, Antoine Jacob (1640-85), a French dramatic author, horn in Paris. He was called to the har in 1660, but made his reputation as a dramatist the same year hy his comedy entitled Mariage de Rien. He wrote numerous dramatic works which are characterised by their orlginality. Some of them are: Les Bestes raisonnables, 1661; Le Mary sans femme, 1663; Throsybule, 1663; L'Impromptu de l'hostel de Condé, L'Impromptu de l'hostel de Conde, 1663; L'Escolle des falles, 1666; Crispin gentilhomme, 1677; La Dame médecin, 1678; and La Femme juge et partic, 1669, a comedy in five acts, his masterpiece.

Montfort, the name of an ancient French family, which is taken from the castle of Montfort or Montfort l'Amaury, near Paris. It was founded by William, the son of Amaury, Count of Hainault, who married the heiress of Montfort about 952 Some memhers of the family are: Simon IV. de Montfort (c. 1160-1218), who took a prominent part in the crusade against the Albigenses. Amauri de Monifort (1192-1241), who was made constable of France in 1230. Guy de Monifort (d. 1228), brother of Simon IV., whom he accompanied on his military exploits. Yolande (d. 1322), who married Arthur II. of Brittany.

Monifort Simon de Farl of Lei-

Montfort, Simon de, Earl of Leicester (c. 1206-65), born in France. He offered his services to Henry II., who was so highly pleased with the young French noble that he conferred on him the title of Earl of Leicester. He married Elinor, sister to King Henry III. and the youthful widow of that Earl of Pemhroke to whom, more than to any other, the people of England owe Magna Charta. After this marriage — which was view

De N the :

The king swore to ohserve them, hut sent forthwith to the pope praying to be absolved from his oath. The hull of absolution arrived. Henry set his barons at defiance, and the war hegan with the hattle of Northampton. At Lewes the royal forces were signally discomfited, and the king taken cap-The conditions exacted from tive. the king were that he should observe Magna Charta and the Charter of the Forests; he moderate in his expenses and grants until his old debts were paid off, and that Englishmen only should he chosen counsellors. queen (Elinor of Provenco), who was in France, now occupied herself in collecting a large army. To deliherate upon the measures to he adopted at this great crisis, writs were issued to the sheriffs, in 1265, by De M., directing them to roturn two knights for each county and two citizens or hurgesses for every city and borough. and from this time may he clearly dated the recognition of the Commons as an estate of the realm in parliament. A second war hroke out, and this time the popular cause was weakened by defection and treachery. Prince Edward (afterwards Edward I.) encountered the barons at Evesham with a greatly superior army; De M. was defeated and killed. Like Cromwell, whose career in many respects resembles his own, he was denied a grave by the royalists, his head being sent to Wigmore Castle and his mutilated limbs to different towns.

Montgolfier, Joseph Michael (1740-1810), the inventor of air halloons, was horn at Vidalan-les-Annonai. In conjunction with his hrother, Jacques Etienne, he devoted himself to scientifie pursuits, and having discovered that a halloon, with a car attached to it, could be kept suspended by a supply of heated air, made his first experiment with his hrother in 1783. He was also the inventor of an hydraulic machine called the water-ram.

Montgomerie, Alexander (c. 1556-10), a Scottish poet, horn in 1610), Ayrshire, and the hrother of Robert M. (d. 1609). He held office in the Scottish court in 1577 and became poet laureate, hut in 1586, having obtained a royal licence, he left England for travel on the Continent. Ho was, however, imprisoned and his pension withheld, to be renowed, after pension withneld, to be renowed, after a protracted lawsuit, in 1588-89. His chief poem is The Cherric and the of 1 able, that the people were in a search of insurrection. The barons assembled and, under the direction of De M., held the celebrated parliament at ful passages. Other works are: The

Flyting betwixt Montgomery and Polwart (first ed. 1621); and The Mindes Melodie (1605), a version of fitteen of the Psalms, Simeon's song, and the 'Gloria Patri'

Montgomery: 1. A municipal and parl. hor. of Wales, cap. of the co. of the same name, is placed at the foot of a high and well-wooded eminence, ahout 1½ m. from the Severn, and 168 m. N.W. by N. of London. The ancient castle of Montgomery, of ancient castle of Monagomery, or, which some ruins still remain, was founded by Baldwin, a follower of William the Conqueror. Pop. (1911) 983. 2. A dist. and tn. of the Punjah, India, in the Lahore div. The district has an area of 4754 sq. m., and is situated hetween the Ravi and the Sutlej. The town lies 90 m. S.W. of Lahore, and has cotton and silk manufs. Pop. of dist., 465,050; of tn.,

Montgomery, Florence (b. 1847), anthoress, is the daughter of Admiral Sir Alexander Montgomery. Encouraged hy Whyte Melville, she published her first hook at the age of twenty. This tale, entitled 4 Very Simple Story, achieved great success, simple Story, achieved great success, and her reputation was secured on the appearance of Misunderstood, 1869, which was still more popular than her earlier work. Other hooks are Thrown Together, 1872; Thwarted, 1873; Wild Mike and his Victim, 1874; Seaforth; 1878; Transformed, 1886; Prejudged, 1900; An Unshared Secret, 1903.

Montgomery, Gabriel, Comte de (c. 1530-74), a French knight and officer in the Scottish Lifeguard of the Comte de King of Franco. At a tournament given by Henry II. in honour of his daughter's marriage with Phillp of Spain, M., at the king's command, entered the lists unwillingly with hlm and accidentally killed him. although blameless, left France, and soon after emhraced Protestantism in England. On the commencement of the religious wars in 1562, he returned to his nativo country and defended Rouen with great hravery. third religious war M. gained many advantages over the royalists; he escaped from the massacre of St. Bartholemew and fled to England. Noxt year he returned to Normandy, hut being compelled to surrender the castle of Domfront, he was carried to Paris and was heheaded after long imprisonment.

Montgomery, James (1771-1854), a British poet and hymn-writer, was bern at Irvine, ln Ayrshlre. the took up journalism, coming the state of thirty earth. Sheffield Iris for upwards of thirty earth, years. In 1806 he produced his days. upon the French conquest of Switzer- of

and land, and in 1810 published another volume of verse entitled The West Indies, in which he appeals for the aholition of the slave trade. were followed by The World before the Flood, 1812; Greenland, 1819, a poem founded on the Moravian missions to Greenland: Songs of Zion, 1822, and The Pelican Island, 1826, a poem written in imitation of Shelley, which is generally considered his hest work. He also wrote Lectures on Poetry and General Litera-ture, 1833, and many hymns, upon which his reputation now mainly Some of these are: Songs of rests. Praise the Angels sang: For ever with the Lord; and Go to Dark Gethsemane.

Montgomery, Robert (1807-55), an English poet, horn in Bath. In 1828 he published The Omnipresence of the Deity, Death, A Vision of Death, A Vision of Hell, and in 1829 Satan, which was scathingly reviewed in an orticle by Meaning The Property of the Property of the Meaning of the Property of the Meaning of the Property of the Property of the Meaning of the Property of the Property of the Meaning of the Property of the Propert article hy Macaulay. He went to Lincoln College, Oxford, in 1830; was ordained in 1835, and devoted himself zealously to his duties as ourate at Whittington in Shropshire. In 1836 he came to London, and then went to St. Jude's Chapel, Glasgow, in 1838, and back in London again in 1843 at the Percy Street Chapel, St. Paneras. At all these places he

drew very large audiences.

Montgomeryshire, an inland co. of N. Wales, between Shropshire on the E. and the Welsh counties, Merioneth and Cardigan, on the W. Area 925 sq. m. The surface is almost wholly mountainous (Plinlimmon, 2469 ft.), a large portion consisting of hleak elevated moorlands, hut toward the English border there are several warm, fertile and well-wooded valleys. The Severn, the Vyrnwy (Liverpool's main water supply), and the Dovey are the principal rivers. The county helongs almost entirely to the basin of the Severn. mineral wealth of M. is not great, but copper, lead, and zine are procured, and millstones, slates, and limestone are quaried. Cattle and sheep, and the pure breed of Welsh ponies called the pure oreed of Weish points carry in Merlins, are reared. The Welsh-flannel manufacture is extensively carried on in the county. Tho capital is Montgomery. The county sends one member to the House of Commons. Pop. (1911) 62,202.

Month (interval of time) is the time which elabors between one new

time which elapses hetween one new moon and the next. This interval is not constant owing to movements of the moon's orbit relative to the Its mean length is 29.5305887 earth. There are five distinct classes 'The sidcreal M.,' or the time circuit, averages complete

perigee to perigee, averages 27.554599 days; the 'tropical M.,' or the interval from one vernal equinox to the next, averages 27.32158 days. The average 'nodical M,' or the interval from a node to a similar node, is 27-2122222 days; the 'common or synodio M.' is the interval

29.5305887 days noticed ahove. Montholon, Charles Tristan, Marquis de (1783-1853), a French general and diplomatist, horn at Paris. He first entered the navy, but later joined the army and served in many campaigns. In 1809 Napoleon made M. chamher-lain; he employed him at Wartzburg, 1811-12, and in 1815 M. accompanied Napoleon to St. Helena. With General Gourgaud ho published General Gourgaud ho published Mémoires pour servir à l'Histoire de France sous Napoléon, écrits à Ste. Helène sous la dictée, 1822-25. M. accompanied Louis Napoleon in his attempt at Boulogne (1840), hut as his chief he was sentenced to twenty ycars' imprisonment at Ham. M. published in England Récits de la Captivité de Napoléon in 1847, and about a year after regained his liberty.

Monthyon, see Montyon.

Monti, Vincenzo (1754-1828), an Italian poet, was born at Fusignano, near Ferrara. At the beginning of his career he was sceretary to Luigi Braschi, and at that time was a violent enemy of the French, but in later life he became a Republican, noxt a panegyrist of Napoleon, and lastly a eulogist of the Emperor of Austria. He was prefessor of eloquenco at Pavia during the French republic, and during the empire historiographer for Italy at Milan. He was also a knight of the Legion of Honour, and a member of many Honour, and a member of many learned societies. His Basvillina, written on the murder of Hugo Basseville, the French ambassador at Rome, is a wonderful imitation of Dante, and gained him a high reputation. His other chief works were Bardo della Selva Nera, a eulogy of Napoleon. Cantica, a political of Napoleon; Cantica, a political poem; a translation of Homer's Iliad, and Proposta di alcune cor-rezioni ed aggiunte al vocab. della Crusca, an attack on the pedantry of the Cruscan dictionary. He also He also wrote the tragedies of Galeotti Man-fredt; Aristotemo, and Caio Gracco. See works by Cantu (1879, Vicehia). Canada, rising in Snow Lake and (1885-87), and Tumbini (3rd ed., 1894).

Montia fontana (Water Blinks, or Water Chickweed), a small annual plant (order Portulacaceæ) with

27.3216614 days; the 'anomalistic French painter, was born at Mar-M.,' or the time of revolution from seilles. He studied in his native city, hut later settled in Paris, and hy the close of the reign of Napoleon III. had already hecome famous. His pictures are characterised by their fantastic colouring; indeed, M. sacrificed line, composition, and draughtsmanship for the sake of vivid hucs. Among his works are 'The Park of St. Cloud'; 'Corot and his Models'; 'The Court of Henry III.'; 'The Miraculous Draught of Fishes.'

Montigny, a com. in Lorraine, Germany, 11 m. S.W. of Metz, on the Moselle; has railway workshops. Pop. 14.015.

Montilla, a tn. of Spain in the prov. of Cordova, and 20 m. S.S.E. of the city of that name. Manufs. of coarse linen and earthenware are carried on,

and a famous wine is grown in the vicinity. Pop. 13,603. Montluc, Blaise de Lasséran (1502-77), a marshal of France, born of an illustrious Gurenne family, and one of the bravest, if cruellest, soldiers of all time. As a captain of infantry, fought under Brissac against the Italians, and narrowly missed ending the war by a coup de main. Per-formed brilliant exploits at the head of his arquehusicrs at Cérisoles (1544), and again at San Damian, Bènc, and Costemiglia. Became lieutenantgeneral of the government of Gurenne (1564), and executed Protestants wholesale 'with a ferocious gaiety.' His last military act was the siege of La Rochelle (1573), after which he devoted himself to compiling Commentaires of memoirs of military life.

Montlucon, a tn. of France in the dept. of Allier; is picturesquely situated on the slope of a hill on the r. b. of the Cher, at the southern extremity of the Canal de Berri, 40 m. W.S.W. of Moulins. It manufs. It manufs. mirrors, glass, chemicals, and sewing machines, and trade in corn, wine, and fruits. Pop. 34,000.

Montmartre, a northern quarter of Paris, within its fortifications. It is a Sunday resort of Parislans. lies at an altitude of 320 ft.

Montmedy, a tn. and second-class fortress of France in the dcpt. of Meuse. It is defended by extensive outworks, and has a barracks, military hospital and prison, and manufs.

of Quebcc. The falls at its mouth are Water Chickweed), a small annual 150 ft. wide and 265 ft. high; they plant (order Portulacaceæ) with pale green leaves and cymes of white 12. A com. in the dept. of Scine-etflowers. It is common in wet places. Monticelli, Adolphe (1824-86), a Forest of M. is a favourite resort of the Parisians. and cheap lace. grows

cherries. Pop. 6000.

Montmorency, Anne, first Duc de (1493-1567), marshal and constable of France, belonged to one of the oldest and greatest of the noble families of France. He received, it is said, the name of Anne from his god-mother, Anne of Brittany. He distinguished himself in the wars be-tween Francis I. and the Emperor Charles V., and was taken prisoner along with his sovereign in the battle of Pavia. He afterwards became the leader of the French government, and was made constable in 1538; he was suddenly banished from court in 1541, but returned on the accession of but returned on the accession of affairs. In 1557, he commanded the battle of St. Quentin, in which he was taken prisoner. During the minority of Charles 1X., M., with the Duke of Guise and the Marshal St. André, composed the famous triumvirate which resisted Catharine de' Medici. In 1562 and 1567 he commanded the royal army against the Huguenots, and in both wars gained victories over them, but was fatally wounded at St. Denis, 1567.

Montmorency, Henri, Duc de (1595-1699)

1632), the son of Duke Henry I., and grandson of Anne, Constable of France. He took part in the religious wars (1621-30), took Ré and Oléron in 1625, and defeated the Picdmontese in 1630. He was made marshal the same year, but being provoked into rebellion by Riebelieu, he joined the party of Gaston, Duke of Orleans, and placed bimself at the head of the insurgent army. Ho was, however, defeated by Marshal Schomberg at Castelnaudary in 1632, and, 80,230. being severely wounded, fell into the

hands of the enemy and was be-headed as a traitor at Toulouse. Montoro, a tn. of Spain, in the prov. of Cordova, built on a rocky ridge around which winds the Guadalquivir, 26 m. E.N.E. of Cordova. The heights in the vicinity are clothed with olive plantations, and oil is largely exported from this quarter. Woollens and earthenware

are manufactured. Pop. 15,000. Montersoli, Fra Giovan Angelo Montersoli, Fra Giovan Angelo 1500-63), an Italian sculptor, born near Florence. He studied under Andrea Ferrucci at Fiesole, and was afterwards employed at Rome, Andrea Ferruger at Flosoie, and was afterwards employed at Rome, Perugia, and Volterra, finally working for Michael Angelo at San shaped island of about 30 m. in Lorenzo, Florence. About 1527 he turned month, and in 1530 was invited to Rome by Pope Clement VII., who employed him to restore some statues. Some of his works are: the company, which had for its object tomb of the poet Sannazzaro, at the conversion and civilisation of

It has manufs. of Naples; the statue of Andrea Dorla, famous at Genoa; the fountain in the piazza and the facade of the cathedral at Messina; and various statues in the church of the Servites at Bologna.

Montpelier, a city, cap. of Vermont, U.S.A., co. seat of Washington co., on the Winooski R. The State Capitol is one of the most magnificent buildings in the U.S.A. Manufs. include lumber, flour, saddlery, and hardware. Has granite quarries near.

Pop. (1910) 7856.

Montpellior, a tn. of France, cap. of the dept. of Hérault, is situated on an eminence on the r. b. of the Lez, 30 m. S.W. of Nimes, and 17 m. N.W. of Cette, the port of this town. It is tregularly huilt, with narrow, steep, but generally clean streets, and the houses are mostly well built. It has a cathedral, with no pretensions to beauty or interest; a university; an exchange, with a fine Corinthian colonnade; a court-house; a medical school, etc. The botanic garden of M., the earliest collection of the sort in France, was established in the reign of Henri IV. There are, among other establishments, cotton and other establishments, cotton and woollen factories, dye-works, paper mills, distillerles, breweries, sugarbouses, and chemical works for the making of alum, Prussian blue, etc. The principal articles of export, besides the produce of the manufactures, are winc, oil, fruits, wool, and other rural produce. Towards the end of the 8th century M. was first raised into the position of an important two governed by breeditary. portant town, governed by hereditary lords under the bishops of Mague-leonne. At the Reformation a great number of the inhahitants embraced the side of the Huguenots.

Montpensier, Anne Marie Louise d'Orleans, Duchess de (1627-93), known as 'La Grande Mademoiselle'; daughter of Gaston, brother of Louis XIII. She was an ambitious woman, hut much of her energy was wasted in secking a husband. She wasted in seeking a husband. She aimed at marriage with Louis XIV., but was defeated in this by Cardinal Mazarin (q.v.). This annoyed her, and during the wars of the Fronde (q.v.) she accompanied the army with Condc, against the court. She contrived a secret marriage with Lauzum, but be was imprisoned soon

since remained in peaceful possession. It was formerly the seat of govern-ment, hut in 1847 it was removed to Quoheo and later to Ottawa. The R. Ottawa, which joins the St. Lawrence hoth above and helow the town, drains an area of about 80,000 sq. m., and M. heing the highest point to which the St. Lawrence is navigable for sea-going vessels drawing 18 ft. of water, it may be considered as the chief port of the great St. Lawrence system. The city situated on the l. h. of the St. Lawrence, 300 m. from its mouth, and stands on the slope of an isolated hill, from which it takes its name. It contains many imposing edifices, among which may be noted the Roman Catholic church of Notre Roman Catholic ohurch of Notre Dame, Christ Churoh Cathedral, and the M'Gill University. There is extensive wharfage and dockage, and the city is an important railway centre. The manufacturing industries are considerablo, and include tanneries, breweries, iron, brass and lead works, flour and saw mills. There is trade in grain, cattie, lumber, cheese, butter, and fruit. The exports exceed £15,500,000 annually, and the imports reach £19,000,000. The Lachine Canal is a means of communication with neighbouring towns. The Victoria Jubilee Bridge, which spans the St. Lawrence, is nearly 2 m. long. The city is well served Transatlantic steamship services. of Pop. 466,000.

Montreuil, or Montreuil-sous-Bois, a tn. in the dept. of Seine, France, 1½ m. E. of Paris. It is famous for its peach orchards, and has gypsum quarries and manufs. of porcelain, paints, glue, chemicals, and soap. Pop. 35,904.

Montreux, a par, at the eastern end of Lake Geneva, canton of Vaud, Switzerland, which includes the villages of Clarens, Vernex, Territet, Glion, Veytaux, and others. It is a favourite winter resort. Near Veytaux is the famous Castle of Chillon. Pop. 15,230. See Lewis and Gribble's Montreux, 1908.

Montrose, a seaport of Forfarshire, Scotland, 42 m. S.S.W. of Aberdeen. It is rich in historio memories and is now an aerial station. Industries include timher and flax spinning. Pop. (1911) 12,668.

Montrose, James Graham, fifth mouth of the Couesnoa, 15 m. S.S.E.

the Indian trihes. During fifty years | Earl and first Marquis of (1612-50), the settlers were harassed by the treacherous attacks of the Iroquois, but by an heroic resistance they at travel on the Continent, he had an length succeeded in securing the tranquillity of the colony. On Sept. 8, who, however, gave him hut a cool 1760, M. was finally delivered up to reception. Actuated by this conthe British, in whose hands it has since remained in presenting the transport of the king. but more by his discontent with the political supremacy of the bishops and his desire to give a greater independence to his countrymen, he joined the national movement. assisted at the signing of the Coveassisted at the signing of the coupled Abcrdeen for the Covenanters, and finally overthrew Viscount Aboyne, Charles' ligutenant in the N., at the Bridge of Dee (1639). M. now came a second time into personal contact with the king and hence, according to the Presbyterians, arose his great apostasy. M. definitely joined the king in 1641, and was imprisoned the same year for six months in couse-quence of a supposed conspiracy against Argyll. In 1644, with the rank of lieutenant-general and the title of marquis, he defeated the covenanting forces at Tippermuir and Abcrdeen, and in the following year won four other pitched hattles at Inverlochy, Auldearn, Alford, and Kilsyth. His subsequent attempt to raise the royalist standard in the Lowlands was an utter failure, and in 1645 he suffered a crushing defeat at Philiphaugh; next year ho was a refugee in Norway. The respon-sibility for this suddon and disastrous reversal of fortune rests in part on the ill-fated M. himself. He had been hlind to the fact that, while Highland spans the St. Lawrence, is nearly troops will perform unheard-of 2 m. long. The city is well served deeds of daring to defend their with railways, and there are regular clannish honour, they are incapable Transatlantic steamship services, of disinterested combination to further a national cause, and he had, moreover, heen powerless to restraiu the wanton carnage which had heea the regrettable sequel to all his vietories. M. was in the Low Countries when he heard of the kiug's execution. He swooned at the aews, and swore a great oath to avenge the martyr's death. In 1650 ho landed in Caithness with a mere remnant of the little army he had collected, for he suffered shipwreck on the way, and was easily vanquished Strachan's horsemen at Invercarron. The same year he was hanged in the Grassmarket, Edinburgh. Thus ended a life of meteoric splendour.

of Granville, in the dept. of Manohe, plates are made is not brass at all. France. It is connected with the mainland by a causeway 1 m. in length. The island rises to a height of 240 ft., and is crowned by a Encedictine monastery dating from the 11th century. The quicksands that surround the island are exposed at low water, and highly dangerous, whilst the tide comes in at a great Brasses probably hegan to he used

speed. Pop. 250.

Montserrat (Lat. Mens serratus, Sp. Monte Serrado, from its jagged appearance like the teeth of a saw), a mountain of Spain in Catalonia, 30 m. N.W. of Barcelona. From the loftiest peint, San Geroneius (4055 ft.) a magnificent view is obtained. The famous Benedictine monastery, dating from 976, stands on the edge of a huge chasm in the eastern face; it is supposed to owe its existence to the image of the Virgin, said to have been carved by St. Luke, found in 880 in a cave of the mountain. There are also the ruins of 13 hermitages. 2. One of the Leeward Is. in the British West Indies, in 62° 7′ W. and 16° 41′ N. The island is mountainous, rising to 2500 ft. above sea-level, is well watered, and has good roads. The principal products are sugar, molasses and lime juice. Cotton is now being grown. The climate is healthy, the mean temperature heing 78° F. in the shade, and the rainfall varying between 40 and 80 in. per annum. The capital is Plymouth on the S.W. coast. Area 32 sq. m. Pop. 12,200.

Montucla, Jean-Etienne (1725-99), a French mathematician, studied legrica and

a French mathematician, studied classics and mathematics at the Jesuits' College of Lyon, his nativo town. In 1758 he published his great Histoire des mathematiques, afterwards completed by Lalandé, and twenty years later he issued a muchimproved edition of Ozanam's Récréations mathématiques (4 vols.).

Montyon, Antoine Jean Baptiste, Baron (1733-1820), a French philanthropist and lawyer. Successivoly governor of Provence, Auvergne, and Aunis. Became a member of the Royal Society of London. Made numerous donations by way of prizes for scientific and generally useful literary efforts, and left large sums to public hespitals. Among his best known works are: The Influence of Taxation on Morality and Industry, 1808; Observations on the most Celebrated French Ministers of Finance from 1660 to 1701, 1812; and Investigation of the Population of France, 1778.

Menumental Brassés are plates engraved with an inscription, figure, or similar symbol of a departed person of whom thoy serve as memorials. Though invariably spoken of as brasses, the material from which the

plates arc made is not brass at all. It was anciently known as latten, and consists of an alloy of about three-fifths copper, three-tenths zinc, and one-tenth lead and tin. Brasses arc generally found in the floors of churches, the matrix being so censtructed as to hring the face of the hrass level with the payement. Brasses probably hegan to he used as memorials in England about the heginning of the 13th century, but it was not until the reign of Edward I. that they heeame common. The earliest brass remaining, that of Sir John Daubernoun (1277) in the church of Stoke D'Abernon, Surrey, belongs to this reign. The art of brass-making reached its height in the period from 1372-99. There are slight declines and revivals until the time of James I., when the art rapidly declined, to disappear finally in the 18th century. See Herbert W. Macklin's Brasses of England (3rd ed.), 1813.

ed.), 1813.

Monuments (Lat. monumentum, memorial), any memorial of a durable nature erected to perpetuate the memory of a great person or event. They have in days past frequently taken the form of mounds, triumphal arches, mausoleums, tomhs, ohelisks, or monumental brasses. The ancient M. of Great Britain and Ireland are protected by the Anciont Monuments

M. of Great Britain and Ireland are protected by the Anciont Monuments Protection Act of 1882.

Menza, a In. in the prov. of, and 10 m. N.N.E. of the city of Milan, Lombardy, Italy. The cathedral of San Giovanni, founded by Queen Theodelinda in 595 and rebuilt in the 14th eentury, contains the famous iron crown of Lombardy. There are manufs. of silk and woollen goods, hats, leather, and machines. King Humbert of Italy was assassinated bere in July 1900. Pop. 42,599.

Moedy, Dwight Lyman (1837-1899),

bere in July 1900. Pop. 42,599.
Moedy, Dwight Lyman (1837-1899), an American evangelist, born at Northfield, Mass., U.S.A., became 'convorted' in 1855, and opened a Sunday school in Chicago, which subsequently developed into the Chicago Avenue Church. After controlling the Young Men's Christian Association here for four years (1865-1869), he was joined by Ira David Sankey. Together they wrote the Moody and Sankey 'Gospel Hymns, which were so characteristic a feature of their revivalist meetings both in England (1873, 1881, and 1892) and America. His sermons, which have been widely translated, are marked by their conviction, simplicity, and homely phrascolegy.

homely phrascology.

Moody, Fanny, an English soprane singer, was born at Redruth, Cornwall. She came out as prima donna under Carl Ross, and sarge for four

Though invariably spoken of as wall. She came out as prima donna brasses, the material from which the under Carl Rosa, and sang for four

years in Royal Italian Opera, being mum 73°, due to variation in speed associated with Sir Augustine Harris, round the orbit; diurnal, about 1°, Since 1897 she has toured in all parts of the world with Mr. Soutboote Mansergh (Charles Manners) in the Moody-Manners Opera Company.

Moon, The, is the earth's satellite. revolving round it in a period of 27 days 7 hrs. 43 min. 11 sec., but eccentricity of orbit and 'perturbations' cause this to vary by as much as 3 hours. The ordinary month is its synodic revolution period; value, mean 29.53 days the period from one phase to the same phase again. Apparent motions, from E. to W., rising and setting 51 min. (mean, varying greatly) later each day: the 'circle' is in a plane inclined to the equator from 28.6° to 18.3°; during the month its declination varies from +28.6° to -28.6°; this variation lessons gradually over a period of 9½ years to ±18.3°, and causes great variations in retardation of rising and setting, most striking when the M. is at full. When the full M. occurs at the time When the full M. occurs at the time of autumnal equinox, i.e. when it is near the first of Aries, it rises for some nights at much the same time, and 'coasts along' the E. horizon; this is the harvest M., the full M. nearest to the autumnal equinox. The next full M. is the hunter's M. Both snn and M., being nearer to the earth tban the stars, have an eastward motion among them during the year; the M. being nearer than the sun has a greater eastward motion. sun has a greater eastward motion, and gains 12; (average) daily on that body, which is the cause of the retardation of rising.

retardation of rising.

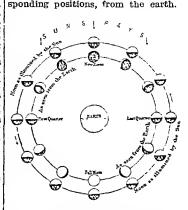
True motions.—(1) Revolution in an orbit round the earth, the shape of which is found from the variation of the M., 30°: it is

varying | apsides

(q.v.) moves round eastwards once in about 9 years; the mean distance of the M. from the earth is 238,840 m. or the M. from the earth is 235,840 m., maximum, 252,972 m.; minimum, 221,614 m.); orbital velocity, 2288 m. per hour; mean parallax, 67' 2', giving that of the earth at the M.'s surface, 2'; real diameter, 2163 m., giving a volume ½ that of the earth (2) Axial rotation in exactly the same time as the revolution in consequence. time as the revolution, in consequence see on the whole 59 per cent. of the roundity of the Al. Is well snown, total surface—41 per cent. con-stantly turned to us, 18 per cent. and its surface features distinguish-stantly turned to us, 18 per cent. able. Under the best conditions the visible at times. This is due to (3) Librations. These are slighter movements: libration in latitude due to virtual distance of 100 m., sufficiently near to distinguish seas, rivers, lakes, variations in the inclination of the forests, great cities, etc., if such axis, about 6½°; in longitude, maxi-lexisted. Many magnificent photo-

really an apparent motion.

Phases.—These are due to the varying elongation, or angular distance from the sun. At new M. it is zero; at full, 180°; half M., 90°; the positions heing respectively consistent opposition and quadrature. junction, opposition, and quadrature. The accompanying diagram shows these and also the phases. The M. is shown on its orbit viewed from outsido the whole system, while the outer series shows the view, for corre-



It will be observed that (1) the 'horns' are always turned from the sun; (2) the waxing M. has its right side illuminated, the waning M. its left. When less than half of the illumined side is seen it is called the crescent, when more the gibbous, M.

Mass, about $\frac{1}{6}$; density, 0.61; superficial gravity, $\frac{1}{6}$ that of the

earth. The influences of the M. on the earth, beyond magnetic disturbances, are comprised in Tides (q.v.), an interesting question arising as to the slowing down of our rotation by friction, with a consequent lengthening of day and night. Being the nearest of the heavenly hodies, our interest is centred in the appearance of the M. and the conditions pertaining to it considered as a possibly. of which it presents always the same hahitable globe. Viewed through a spect. Actually, we are enabled to good field or marine glass, the seo on the whole 59 per cent. of the rotundity of the M. is well shown, total surface—41 per cent. con- and its surface features distinguish-stantly turned to the latter of
uneven. Large shallow depressions, Galileo's maria, the dull patches valleys, plains are to be seen; but evidences of volcanic action, in the form of volcanoes, cracks, and fissures far transcending anything of the kind on the earth, form the most striking fcature. Over 200,000 eraters (Pickering), some of over 100 m. diameter, are grouped and ranged over the whole surface. Bailly, the largest, is 180 m. across. (The largest terrestrial crater, Aso San, is about seven.) The magnitude of these is rather evidence of the low superficial gravity of the M. tban of greater volcanic forces; material would be projected six times as far as on the earth. Other features are 'rills' (deep crooked valleys), clefts of unknown depth, valleys), cicles of thishown acpen, some half mile wide and several bundred long; 'rays,' light coloured and brilliant streaks, radiating from craters, notably Tycho; very conspicuous near full M. Ten ranges of mountains are noted, and heights arcestimated by micrometer measurements of shadows. The Leibnitz range is the highest, Schmidt estimating its culminating peak at 41,900 ft. above the neighbouring valley. tt. above the neighbouring valley. The best view of the M. is obtained a little after the half M. (For a good description see T. W. Webb's Celestial Objects for Common Telescopes.) Certain 'variable spots bave been noted, but no variation in form or colour has been definitely. ascertained: Professor Pickering. however, claims such to be shown in bis photographs and confirmed by his own observations.

Light of the M., alfuen that of direct rays of the sun (Zöliner); albedo (q.v.), 0-174 (Zöliner)—about the reflecting power of light-coloured the reflecting power of light-coloured sandstone, but there are great variations. Heat (first detected by thermopile by Melloni in 1846, consists of reflected heat, 25 per cent, and 'obscure beat' (absorbed then radiated); Lord Rosse gives 1864, Hutchins 1878/166, that of the sun. Temperature of surface is very uncertain; Rosse estimated over 100° C. maximum, 200° C. minimum, but later (also Langley) considered it never over the freezing point of water, never over the freezing point of water. Very, however (1899), supports the carlier view.

pearance, the . spectroscopic ...

Air and

graphs have been secured by De La II any, if would not produce when in Ruc in England, Rutberford in barometric pressure. It is considered America, and at the Paris Observatory, these last being unrivalled, atmosphere, and that it has been The surface of the M. is broken and absorbed by the inner rocks when absoroed by the inner roces when cooling, or has retired frozen within the cavities of the M. Stoney points out that accepting the kinetic theory of gases, the M.'s gravity is insufficient to retain an atmosphere. As regards water, there is no evidence whatever of its presence either as vapour, liquid, or solid. The sur-face of the M. leads irresistibly to the belief in its former existence.

Life.—It appears quite conclusive that life as we know it does not and

cannot exist on the M.

Lunar theory is not yet perfect. The 'perturbations' or irregularities of movement due to disturbing influences are not yet completely mastered; the M.'s motions are not fully accounted for, or accurately predicable, but the subject is too complicated for any elucidation in brief. See Hind, Solar System.

The periodic variation of the visible

portion of the surface of the M. was observed by Gailleo, who also constructed the first map. Riccioli (1651) commenced the system of lunar nomenclature. Libration in longitude was discovered and described by Hevelius (1647). Evection, suspected by Hipparchus, discovered by Ptolemy. Variation, claimed for Abil Wefa (9th century), but generally attributed to Tycho Brahé. Sir I. Newton explained it by the theory of gravitation. Parallactic equality, first clucidated and explained by Laplace; but his work was corrected by Adams, 1863. See also Airy in Month. Not., vol. xxxiv., Nov. 1873.

Additional references: Neison, The Additional references: Netson, The Moon, 1876; Nasmyth and Carpenter, The Moon as Planet, World, and Satellite, 1885; T. G. Elger, The Moon, 1895; Pickering, The Moon, 1994; also lunar atlas, Harcard Annals, vol. ll. For a fanciful and entertaining but instructive novel on the subject, read H. G. Wells's First Men

in the Moon.

Moon, William (1818-94), inventor of Moon's embossed type for the Becoming blind, born in Kent. Becoming totally blind in 1840, he set about producing an embossed typo for those so afflicted, and in 1845 brought out bis system, which differed from former systems in almost entirely discarding contractions. His first publication, The Last Days of Polycarp, appeared in 1847, followed by The Last Hours of Cranmer, and other books of devotion. Ho also issued an edition of the Blble, and absence of any gascous atmosphere, extended his system to foreign

Royal Geographical Society in 1852, a fellow of the Society of Arts in 1859, and LL.D. of the University of

Philadelphia in 1871.

Moon, Mountains of the. From classical times Africa, with its geography hidden beyond the Sahara, has been the source of mythical legeuds, some based on truth. sources of the Nile remained un-discovered till 1861, when Captain Speke oxplored the region S. of Lake Viotoria Nysnza. Ptolemy and all other geographers had placed the source in the mountains of the source in the 'mountains of the moon,' and these were mapped E. and W. in Equatorial Africa. There was nothing but rumour and legend, based probably on information ' passed down ' among African tribes to Egypt. Captain Speko considered the crescent of mountains explored by him N. of Lake Tanganyika to be part of tbcm. Dr. Beke considered them to be a N. and S. extension of the Abyssinian plateau. They are now generally identified with the group round Mounts Kenia and Klima-Njaro, or the group round Ruwonzorl further W. The latter is more probably correct.

Moonshiners, a colloquial synonym in the south-eastern and other states

in the south-eastern and other states of America for distillers of whisky. Moonta, a municipal tn. of Daly co., S. Australia, on Spencer Gulf, 90 m. N.W. of Adelalde; has copper mines, Pop. 7000.

Moore, Albert Joseph (1841-93), an English painter, born in York. The

English painter, born in York. mural decorative work he executed Alban's Chure

all his later merit of 'Se soms' (1881 soms' (1881 and 'A Sumi

harmonious blend of delicate colour, combined with graceful posture and charming lines of drapery.

Moore, Edward (1712-57), an Eng-

lish dramatist and man-of-letters, born at Abingdon, Berks. Garrick played the part of Beverley, the gambler, in M.'s once popular gambler, in M.'s once popular tragedy, The Gamester (1753), and Walnole and the Lords tragedy, The Gamester (1753), and Horace Walpole and the Lords Chesterfield and Lyttelton contributed to bis weekly journal, The World (1753-57).

Moore, George (b. 1853), an Irish novelist, began by writing poetry;

his Flowers of 1877. His novel (1885), Esther masterpiece, and proclaim him a lively interest in

languages, beginning with Irish and is testified by his comedy, The Bend-Chinese. Ho was made a fellow of the ing of the Bough (1900), and his Royal Geographical Society in 1852, Diarmuid and Grania, in which Mr. a fellow of the Society of Arts in Yeats collaborated (1901), and also by his volumes of candid revelations, entitled Ave (1911) and Salve (1912). His early art training lends an additional value to his Modern Painting (1893).

Moore, Henry (1831-95), an English sea painter, born at York, was a brother to Albert M. After painting animals and landscapes with all the loving detail of the Pre-Raphaelites. he discovered his talent for sea-scapes, and henceforward painted little else. His best pictures are:

The Newbayen Packet, 1878; 'Mount's Bay,' 1886; and 'Hove-to for a Pilot,' 1893.
Moore, John (1729-1802), a Scottish author, attended Glasgow Univerattend, and was a doctor by profession. As he was attached to the British army in Flanders in a medical capacity (1747-48), was for a time surgeon to the English ambassador at Versailles, and travelled for five years (1772-77) on the Continent as tutor to the young Duke of Hamilton. portunities manners of for

his himself of his Journal of a Residence in France (1793), whilst Byron formed his Childo Harold on Zeluco, a selfish libertine, whose name supplies the title to the most popular of M.'s novels (1789).

Moore, Sir John (1761-1809), a British general, born at Glasgow, was the son of John M. (d. 1802). Entering the army as ensign in 1776, he at Coombe Abbey for the Earl of served a long and distinguished Craven, and in the chancel of St. apprenticeship to war. During the

apprentiessing to war. During the scent on Corsica, he was wounded the capture of Calvi (1794); in the est Indies he distinguished himself the taking of the Vigie and Morne ortune (1796), and two years later he was engaged in quelling the Irish insurrection. In 1799, during the Dutch campaign, he was wounded at the engagement of Ergenties. Zee the engagement of Egmont-op-Zee, and be was again disabled at the battle of Alexandria during the expedition to Egypt (1801).. The story of his command in Spain cannot be told command in Spain cannot be told here. Suffice it to say that, after a calamitous retreat from Astorga, which almost rivalled that of 1812 in the hardships and suffering it entailed, but which seemed the last resort in view of the imminent concentration against him of overwhelming French forces, M. met a hear's death like Enaminonds. hero's death, like Epaminondas, Wolfe, and Nelson, at the very moment of victory on the field of Corunna (1809).

Moore, Mary, an English actress;

first appeared on the stage in 1885, the plumage has many hues. The when she toured in the provinces, nest is huilt by the waterside, and From that year dates her association the eggs are reddish-white with when she toured in the provinces. From that year dates her association with Sir Charles Wyndham, with whom she was part-proprietor of the Criterion and Wyndham's (opened Since 1903 she has similarly assisted him in the control of the New Theatre, and has acted with him as Ada Ingot in David Garrick (1886), Lady Amaranth in Wild Oats, Grace Harkaway in London Assurance, Lady Susan in The Case of Re-bellious Susan, Lady Jessica in The Liars, Lady Eastney in Mrs. Dane's Defence, Mrs. Gorringe in Gorringe's Necklace (1903), and and Mrs. Baxter in The Mollusc (1907).

Thomas (1779-1852), Moore, poet, may be regarded as the national poet of Ireland. He early hegan to write poetry, and in 1799 was permitted to dedicate a metrical translation of Anacreon to the Prince of In 1803 he was given the Wales. appointment of Admiralty registrar at Bermuda, the work of which was done hy a deputy. In 1801 he had published Poems by the late Thomas Little, and six years later hegan to appear his Irish Melodies, with music by Sir John Stevenson. In another branch of letters, M. was also to make a great success, and he showed himself a master of satire in The himself a master of satire in The Twopenny Post-bag (1813), in which he lampooned the regent and his associates. One of the most popular hooks of tho day was his eastern poem Lalla Rookh (1817), for which he received £3000. In the following year appeared the amusing Fudge Family Abroad, written in the vein of The Twopenny Post-bag. Byron had entrusted M. with his Memoirs, but when Byron died in 1824, M. destroyed the Memoirs and wrote an excellent biography of his friend (1830), which ranks among his best (1830), which ranks among his best work. He also wrote a biography of Lord Edward Fitzgerald, and in 1834 published Travels of an Irish Gentle-man in search of a Re Memoirs, Journals, and ence was edited by

was edited by 3-56). There is a monograph hy Spain, Morocco. (1853-56).Stephen Gwynn in the English Men of Letters series (1905).

Moorhead, a city and the co. seat of Clay.co., Minnesota, U.S.A., 212 m. N.W. of Minneapolis. It is the centre of an agricultural region, has flour mills and machine shops, and manuts. bricks. Pop. (1910) 4840.

Moorhen, or Waterhen (Gallinula after chloro;

order. rivers,
and though not web-footed an active highly cultivated race, and in the diver and swimmer. Though black study of mathematics, science, and and whiteapparently from a distance, philosophy cclipsed all other Euro-

orange-brown spots.

Moorings, a place in a harhour or where a vessel may ride securely either at her own anchors or attached by ropes or chains to some permanent one, a number of which, called 'chain M.,' are usually found in every harhour. 'Swinging M.' consist of a table fastened to the 'chain M.' and supported by a

bnoy.

Moorish Alekannedan.
TECTURE—Mohammedan. Moorland is one of those com-munities of plants called hy coolomunities of plants cancer in congress 'a plant association,' the idea being that a particular species of plant predominates according to various conditions of the locality, though the plant itself may change these conditions to its own disadvan-The popular idea of a M. is tage. found to he far from accurate when a definite investigation is made of characteristic floras; for example, there are great stretches of M. from which heather is altogether absent.

Moors (Lat. Mauri, meaning dark; Sp. Moros) are a people who form the great majority of the population of Barbary. Their appearance indicates their origin, which is a mixture of the Mauri (from which they derive their name). Numidians, Phœnicians, name), Numidians, Phonicians, Romans, and Arabs, who have sucof cessively hold possession In consequence, they are country. found to vary considerably in appearance and character in different parts of Barbary, but all show more or less strongly the symptoms of a considerable infusion of Arahian blood. They were, after a severe struggle, con-quered and converted by the Arabs in 707. In 1091 they were summoned by the latter into Spain to aid in stemming the tide of Christian conquest, and retired, in 1238, to Granada, where they founded their kingdom, tory cannot be

Algiers, Tunis, LGIERS, TUNIS,

Moors in Spain, a composite African race, who, invited by the Church party to assist in the suppression of the Visigothic aristocracy, invaded the whole peninsula (710), and became the dominant power until the 11th century. Cordova was the great centre of the Saracen dominion 755, when its universels in Roman days, revived. ras in

Arab invaders, though luxu-

pean races. Through the M. the and municipal tn. of the United culture and civilisation of the Provinces, British India, 50 m. N.W. ancients was chiefly preserved, and of Bareilly. Pop. 75.000. The dist. was transmitted to the modern world. was transmitted to the modern world. The race widely intermarried with the natives of Spain. See Spain.

Moor Steamship Company, founded in 1889 as the South Shields Steam adopted its present name. The company has a flect of thirty-one steamers, with a tonnage of 105,789, and a capital of £300,000. They are cargo carriers to all parts of the world. The managers are Messrs. Walter Runciman & Co., Newcastleon-Tyne.

Mooruk, see Cassowary.

Mooruk, see Cassowary.
Moose, see Elk.
Moose Factory, a post established in the 17th century by the Hudson Bay Company, and situated at the mouth of the Moose R. in Hudson Bay, New Ontario, Canada.
Moose Jaw, a city of Saskatchewan, Canada, on the Moose Jaw R., 48 m. W. of Regina. It has large flour-mills, steel and bridge works.
Pop. 25,000.
Moosonee, a dist adjoining the

Moosonee, a dist. adjoining the lakes Superior and Winnipeg, to the S. of Hudson Bay, Canada. An Anglican missionary bishop works

Moplas or Mapillas, the race of fanatical Mohammedans, who are found along the Malahar coast in S. Indla. It is thought that they are sprung from a body of Arah mer-chants who came to India in the 3rd century after the Hegira. The M. to-day number about a million.

Moquegua, a coast prov. of S. Peru, with an area of 5549 sq. m. Pop. 42,694. The cap., Moquegua, is 20 m. from the Chilian frontier, and 85 m. S.E. of Mollendo. The town suffered severely from earth-quakes in 1715 and 1868. Pop. 6000.

Mor (German Moor), a tn. of Hungary, in the co. of Stuhlweissonhurg, 15 m. N.W. by W. of that city. Pop.

10,000.

Mora: 1. A com. and tn. of Spain in the prov. of Toledo, 18 m. S.E. of the city of Toledo. Pop. 8000.

2. A com. and vil. of Sweden in the prov. of Kopparherg, on the riv. Ostor Dal, 45 m. N.W. of Falun. Pop. 9045.

Mora (Lat. delay), a Scots legal phrase horrowed from Roman law, denoting all undue or unreasonable delay in prosecuting one's rights, performing one's obligations, or com-pleting a diligence (q.v.) or a hargain It may disentitle a party to the assistance of the court. Laches is the corresponding English term. Moradabad, or Muradabad, a dist.

wheat, rice, and cotton are grown. Pop. 1,200,000.

Moraine Garden. This is the most recent development in horticulture. It solves the problem of the successful cultivation of a number of Alpine plants, some of which could not previously ho grown away from their native moraine. There the conditions of plant growth are continuous root moisture in summer from the melting of ice and snow, and complete dryness and protection by the snow against frost at other times. These conditions are reproduced by excavating a hole in a sunny mound or hank, about 2 ft. deep, and of any extent, great or small. After pro-viding perfect drainage the hole is filled with small sandstone chips mixed with a little leaf soil, and the plants are introduced with great Water can either trickle through or be poured in daily, and the stones retain moisture in the hottest weather. In the autumn the water supply is stopped, and later the moraine is drained dry. For suitable plants see plant dealers catalogues.

Moral Philosophy, see ETHICS. Morales, Ambrosio (1513-1591), a Spanish historian, was educated at Salamanca. Appointed historio-grapher in 1570, he continued Ocampo's chronicle down to the union of Leon and Castile (1037). M., though lacking the historical sense of Zurita, was vastly superior to Ocampo in the hreadth of his mental outlook.

Morales, Luis (d. 1586), a Spanish painter, was surnamed 'El Divinio' because he confined himself to sacred subjects. In 1581 Philip II. found him in poverty at Badajos, and presented him with an annual pension of 300 ducats—a tardy recompense for a former unceremonious dismissal. This painter, in spite of the detrac-

tions of his critics, deserves remem-brance for his consummate skill in expressing Christian suffering and grief.

Morality, a French term commonly used to describe the plays always known in England as moral plays or moral interludes. These plays, though developed out of the miracle plays (q.v.), are still more closely related to a Latin origin. Their ... sonrce is Prudentius (c. 400), who his Psychomachia had the his Psychomachia subject as did all the morali-

personified abstractions for the human soul. A brief out: one of the earliest extant me

The Castle of Perseverence (c. 1450), will give some idea of the dramatis personæ. It tells the history of Genus Humanum tempted hy Luxuria. When about to be lost entirely he is saved by Pœnitentia, who brings him to the Castle of Perseverence. Here he remains until his old age, when he is tempted by Avarice. Then follows a swift descent towards Hell, whence he is saved by Pity and Mercy. For For Everyman, the most famous of the moralities, see Everyman and Other Interludes in the Everyman's Library. The latest development of the M. was to make it convey some special lesson, theological or educational. In Bale's King Johan it became the medium of history, and hence led to the historical drama.

Merano Calabro, a tn. of Italy in the prov. of Cosenza, 85 m. S.S.E. of Potenza. Pop. 9000.

Morar: 1. A dist and look of W. Inverness-shire, Scotland. The loeh, 12 m. long, is noted as being the deepest in the British Islcs, its maximum depth being 1017 ft. 2. A tn. of Central India in the state of Gwallor, and 3 m. from that city. Pop. 24,500.

Pop. 24,500. Morat, or Murten, a tn. of Switzerland in the canton of Fribourg, on Lake Morat, 15 m. W. of Bern. In 1476 tho Swiss here defeated Charles

the Bold of Burgundy. Pop. 3500. Morata, Olympia Fulvia (1526-55), an Italian scholar and poet, daughter of a professor at Ferrara, Fulvio Pelligrino M. She lectured in public at an early age, and upon the death of her father took up teaching to maintain the family. About 1550 she married a German physician, Andreas Grundler, but they were unsettled, and she suffered much by the siege of Schweinfurt. She died at Heidelberg, leaving many Latin and Greek poems, a commentary on Homer, etc.

Moratalla, a tn. of S.E. Spain in the prov. of Murcia, 40 m. W.N.W. of the city of Murcia. Pop. 13,000,

the city of Murcia. Pop. 13,000.

Moratin, Leandro Fernandez de (1760-1828), a Spanish poet and dramatist, born at Madrid, was the son of a poet. On the recommendation of Jovellanos he became secretary in 1787 to the Spanish embassy in Paris, and after travelling in Europe at public expense to study the contemporary stage, received, through the kindness of Don Manuel Godoy, the post of official translator to the Foreign Office. The arrival of Napoleon in Spain brought misfortune and exile to M. as to others. Of his five connedies the best are New Play (1792), a satiro on the extravagant dramas of the day, and the Little Girl's Consent (1806).

Moratin, Nicolas Fernandez (1737-80), a Spanish poet, held a court appointment under Queen Elizabeth, which he renounced in 1772 in order to accept the chair of poetry at the Imperial College vacated by Ayala. In Madrid he gathered round him a literary coterie, including Ayala, Cadahalso, Muñoz, and Conti. The hest of his poems, which have the meticulous polishand purity of Gray's, are an ode to a champion bull-fighter and an epie canto on the destruction of his ships by Cortes.

of his ships by Cortes.
Moravia (Ger. Mähren), a margravate and crownland of Austria, situated to the E. of Bohemia. It is watered by the March, a tributary of the Danube, which flows through the country from N. to S. Along its N. boundary run the Sudetic Mts.; on the W. are the Bohemian highlands, on the E. the Carpathians and White Mts. The country is principally engaged in agriculture, though there are rich mineral deposits of iron, lignite, coal, etc. Cereals of all kinds are extensively produced, and there is some woollen manufacture. Area \$583 sq. m. Pop. 2,620,014. For history, etc., see articles on Austria

and Bohema. Moravians, known also as The Moravian Brethren, The Bohemian Brethren, or The Unity of the Brethren (Unitas Fratrum), a small Protestant body who somewhat doubtfully trace their origin to the 15th century. In the middle of this century a section of the seet known as Taborites gathered round the Calixtino Bishop of Prague, and formally constituted themselves a sect in 1467. At the time of the Reformation they had friendly inter-course with Luther, though their sympathies were, on the whole, more with the reformed churches. At this time there were some 400 churches in the seet. During the persecutions of tho 16th century many of the brethren fied to Poland, where they were gradu-ally absorbed into other Protestant bodies. In the first quarter of the 17th century the Bohemians and M., being implicated in the revolution which came to an untimely end in 1620, were almost completely exterminated. No more is heard of them until the beginmore is neard of them unto the begin-ning of the next century. Then under the leadership of Christian David, a carpenter, certain M. emigrated to Saxony, where they were well received by Count Zinzendorf (1700-60), who then became their leader. Here they lived at first as ordinary Lutheraus, but later greeted a church of their but later creeted a church of their own. They lived a strict life, with daily prayers, a community of interests and strict exclusiveness. They still retained the form of the episcopate. Branches have now been

established in other parts, and the 1821), an Italian author, became a unity has now four provinces: Ger- Jesuit, and on the suppression of his unity has now four provinces: German, British, N. American, and S. American, cach province managing its own affairs. Once in ten years, a general synod meets, representing all the provinces. The Moravian Church has always heen characterised by its splendid missionary vigour. See histories of the hrethren by Gindely (1856-57). Schweinitz (1885), Croger (1854), Hamilton, and Thompson.

(1854), Hamilton, and Thompson.
Moray (or Murray), James Stuart,
Earl of (c. 1531-70), regent of Scotland, was the natural son of James
V. of Scotland hy Lady Margaret
Erskine, daughter of the fourth Earl
of Mar. On hearing John Knox at
Calder, he joined the lords of the
congregation (1559) in opposition to
the queen regent's party. In 1561
he escorted his half-sister, Queen
Mary, from Paris to Scotland, and
became her chief adviser. He was
created Earl of Moray in 1564, but
lost the queen's favour when he
showed his disapproval of her marshowed his disapproval of her marriage with Darniey (1565). After the murder of Rizzio he was restored to favour, but made his escape to France at the time of Darnley's assassination and Mary's marriage to Bothwell. After the abdication of Mary at Lochleven, he was summoned to Scotland to take up the summoned to Scotland to take up the duties of regent, and after her escape defeated the queen's forces at Langsido in 1568. He came to England to bring accusations against Mary at her trial. He was murdered at Linlithgow hy James Hamilton of Bothwellhaugh, and was buried in St. Giles Cathedral, Edinhurgh. See J. A. Fronde's History of England. Froude's History of England.

Moray Firth, an arm of the North It is about 18 m. across tho entrance, from Tarhat Ness to Burghead. The Spey and the Deveron are the chief rivers draining into the Firth.

both canalised, whilst the Oust forms part of the waterway from Nantes to Brest. The highest land (975 ft.) is in the Montagnes Noires of the N. Brest. The highest land (975 ft.) is in the Montagnes Noires of the N. Barren heath covers a quarter of the province, whilst a third part produces good crops of wheat, rre, buckwheat, degree in 1639, he lost himself in the good crops of wheat, rre, buckwheat, delights of philosophical, and especiand mangels. The fisher culture are important.

order, was appointed librarian to Cardinal Alhani (1773), and in 1790 was choson provost of the chapter in his native city of Chiari, near Brescia.

As a church historian, M. is remembered memhere? ecclesiæ and his A

voluminous Opera Epigraphica were collected at Padua, 1818-1825.

Morchenstern, a com. of Bohemia, Austria, 9 m. S.E. by E. of Reichenherg, on a feeder of the R. Iser. Has glass works. Pop. 8145.

Morchingen, a com. and vil. of Germany in Lorraine, 19 m. S.E. of Metz. Pop. 6967.

Morcone, a tn. of Italy in the prov. of Benevento, 45 m. S.W. of Foggia. Pop. 8600.

Mordaunt, Charles, sec Peter-BOROUGH.

Mordvins, Mordvins, a people of Finnish origin, inhabiting Eastern Russia. Until the middle of the 18th century they were practically pagans, but they are now greatly intermingled with the Russians, and comprise two main divisions, viz. the Moksha and the Erzya. They are of medium height, with fair skins, hlue eyes, and generally oval faces, and they number

ahout 750,000.
More, Hannah (1745 - 1833), an author, born at Stapleton, Gloucestershire. She came to London in 1774, and made the acquaintance of Dr. Johnson, whom she flattered unduly, of Burke, and the leaders of the Bluestocking coterie. Garrick produced her tragedy, Percy, in 1777, but after the actor's death she came to the conclusion that play-golng was immoral, and she henceforth led a retired life. She consorted chiefly with the clergy and philanthropists, started Sunday schools in Cheshire, and organised a movement that led to the Morbihan, a dept., named after the organised a movement that led to the Gulf of Morbihan (Inner Sea), formed formation of the Religious Tract in 1790 from part of Lower Brittany Society (1799). She wrote many rein Western France. The Atlantic coast line has many inlets. The charities and religious institutions. Vilaine and the Blavet, into which There are biographies by William flow the Auray and the Scorff, are Roberts (1838) and the Rev. Henry both canalised willst the Oust forms. Thompson (1838)

More, Henry (1614-87), an English

(1688), Philosophical Poems capital; Lorient is a centre. These towns, Pontivy and Ploerme names to the four arrondissements. Arca 2738 sq. m. Pop. 578,400.

Morcelli, Stefano Antonio (1737- Lady Conway, the Quaker. nd Enchiridion Meta-are all penetrated with

More, Sir Thomas Lord Chancellor, horn in London, was called to the bar in 1496, and soon made a name for himself as a He entered parliament in 1504, and began to take an active interest. While on a mission to Flanders he began to write his most famous work, Utopia, which was published in the following year. In parliament he frequently opposed the erown, until, in 1518, Henry VIII. appointed him Master of Requests and made him a privy councillor. He accompanied the king to the Field of the Cloth of Gold in 1520, and was in 1521 knighted. He rose in favour at court, and in 1529 succeeded Wolsey as Lord Chancellor of England, in



SIR THOMAS MORE

which capacity he showed great ability. He was, however, too con-scientious for the comfort of the monarch, and resigned his high office after his opposition to a bill designed to relax the severity of the heresy laws. For a while he lived in retircment, devoting his energies to a controversy on religious subjects with Tyndale and others. In 1534 he became a marked figure hy his hos-tility to any action of the king against the pope's authority, and ho was eommitted to the Tower. After much attempted negotiation, he was in-dieted for high treason in Westminster Hall, found guilty, and sentenced to be hanged. The sentence was oventrally commuted to de-capitation. A patron of art, an Scherer in the command of the army excellent writer, a sound lawyer, and in Italy. By a retreat conducted with a capable statesman, ho was a great loss to his country. There are several army from destruction. The Direc-biographies, including one by Bridgett tory, nevertheless, deprived him of

(1478-1535), (1891), and another by W. H. Hutton (1895).

Morea (the ancient Peloponnesus, the island of Pelops), a peninsula forming the southern part of Greece (q.v.), connected with Central Greece by the Isthmus of Corinth. The surface is mountainous. Area 8288 sq. m. Patras is the chief port.

Moréas, Jean (1856-1910), a French poet and novelist, horn at Athens. Early left Greece for Marseilles, and thence travelled over Germany, Italy, and Switzerland, finally installing himself permanently in the Latin quarter of Paris. His acquaintance-ship with Verlaine inclined him in such earlier work as Le Pelèrin Passioné to the symbolist as opposed to the realistic school; hut, believing the former to have no enduring literary quality, he turned to the old medieval-romantic style, producing in that vein his Contes de la vieille France (1903). But his best work is a reversion to the classical precision of Malesherhes and Corneille, and includes Iphigénie à Aules, 1904, and

Stances (6 vols.), 1905. Moreau, Gustave (1826 - 98), a French painter, born in Paris. On four occasions he won prize medals at the Salon, where he regularly exhibited. At his death he left 8000 pictures, water-colours, and drawings to the nation, this fine collection heing housed in the Moreau Gallery, Paris. In his early pictures, such as a 'Pietà' (1852) and the 'Death of Darins,' he expresses his indebtedness to Chassériau. One of his finest paintings was 'The Young Man and paintings was 'The Young Man and Death' (1866). His subjects were chiefly taken frem classical or religious story; among his hest-known works are; the 'Athenians with the Minotaur,' 1855; 'Edipus and the Sphinx,' 1864; 'Galatea,' 1880; and 'Moses on the Nile,' 1873.

Moreau, Jean Victor (1701-1813), a French general, born at Morlaix, in Brctagne. Ho took the side of the Revolution, and displayed such military talent that in 1794 he was made a general of division. When Pichegru

ageneral of division. When Pichegru fell under suspicion, the Directory appointed M., in 1796, to the chief-command on the Rhino and Moselle, He defeated Latour at Rastadt, and tho Archduke Charles at Ettlingen, and drove the Austrians hack to the Danube. A suspicion of participation in the plots of Pichegru led to his being deprived of his command, after the coup d'état of 18th Fruetidor. In the following year he sueceded

the chief command, and gave it to But M. remained with the Joubert. army, and aided that young general: and after his death again assumed the command, and conducted the de-feated troops to France. The noble disinterestedness of M,'s character, his military talent, and his political moderation, induced the party which overthrew the Directory to offer him the dictatorship of France, which he declined, and lent his assistance to Bonaparte on 18th Brumaire. M. gained victory after victory over the Austrians in the campaign of 1800, and won the hattle of Holienlinden. A strong feeling of mutual distrust now aroso between M. and Bonaparte. Bonaparte surrounded him with spies. and he was accused of participation in the plot of Cadoudal and Pichegru against the life of the first consul. He was arrested, sentenced to two years' imprisonment, which was commuted into banishment, and M. went to America. Hc, however, landed at Gothenburg (1813), and accompanied the emperor of Russia and the king of Prussia in the march against Dresden, where a French cannon ball broke both his legs, and he died soon afterwards.

Morecambe, a municipal bor, and watering-place of N.W. Lancashire, England, on Morecambe Bay, 31 m. W.N.W. of Lancaster. Pop. (1911)

12,133.

Moree, a tn. of New South Wales, Australia, in Courallie co., 130 m. N.W. by W. of Tamworth. Pop. 2300.

Morel, or Morchella, a genus of fungi, of which the common M. (M. . esculenta) is one of the most delicate edible British fungi. The cap is much wrinkled and ridged, and is attached to the stem from centre to edge. It is yellowish or buff in colour, and somewhat resembles a mass of honeycomb. Ms. are often dried for season-

ing soups, sauces, and gravies, and are commonly used fresh in ragouts.

Morelia, or Valladolia, a city of Mexico and the cap. of Michoacan state, 126 m. W.N.W. of the city of Mexico. It was renamed in honour of General Morelos. There are manufs. of sngar, blankets, and pottery Pop.

39,116.

Morell, Thomas (1703 - 8:
assical scholar, born at (1703 - \$4),classical scholar, born at Eton, Bucks. In 1737 he hecame rector of Buckland, Herts, and in 1775 was appointed chaplain to the garrison at Portsmouth. His writings include: Thesaurus Græcæ Poeseos; Sacred Annals; Notes and Annotations on Locke on the Human Understanding,

Morella, a fort. tn. of Spain in the prov. of Castillon, 36 m. S.W. of Tortosa. It poss castle. Pop. 7500. It possesses an anoient

Morelli, Cosimo (1732-1812), ar Italian architect, born at Imola Italy. In his native city, M. designed the cathedral, two other churches, a hospital, and a theatre, since de-stroyed. He built also the duomo at Macerata, the Berio at Naples, and the Palazzo Braschi at Rome.

Morelli, Giacomo (1745-1819), an Italian bihliographer, born at Venice. He entered the priesthood, and re-mained always a simple abbe, partly, it seems, because of his modesty and partly because of his devouring partial because of his devouring passion for books. After editing the manuscripts of his friend, Farsetti (1771-80), and cataloguing both the classical and Italian manuscripts in the possession of the Narni family, helpot became in 1778 keeper of St. Mark's

Library in Venice.

Morelli, Giovanni (1816 - 91), an Italian patriot and art critic, was born at Verona. He exercised his inborn at verona. He exercised his influence as a member of parliament to pass the Morelli Bill, which was directed against the alienation of works of art. In his Die Werke italientscher Meister in den Galerien von München, Dresden, und Berlin, and again in his Della Pitturiatialiana, he emphysised the need of melium of he emphasised the need of making a

2776 sq. m. In the S., where it is fertile, coffee, sugar, and grains are fertile, coffee, sugar, and grains are extensively cultivated, but the N. part is mountainous. Cuernavaea is the cap. Pop. 179,814. 2. A tn. in the state of Nuevo Leon, Mexico, 45 m. S.E. of Monterey. Pop. 7000. Morena, Sierra, a range of mountains in Spain, stretching E. to W. hetween Guadiana and Guadalquivir. Minerals abound. Alt. 7900 ft

Minerals abound. Alt. 7900 ft.
Morenci, a tn. of Arizona, U.S. A., in
Graham co., 100 m. S. of St. Johns.
Pop. (1910) 5010.

Moreri, Louis (1643-80), a French writer, horn in Provence. In 1674 he puhlished his *Grand Dictionnaire Historique*, which was widely translated. The twentieth and hest edition of this encyclopædia (published in 1759) is still consulted for hiographies.

Moresnet, or Kelmis, a tn. and neutral territory hetween Prussia and Belgium, 5 m. S.W. of Aix-la-Chapelle. It was formed in 1816, heing under the joint control of the two governments, and represented by a burgomaster. There are valuable lead and zinc mines, and the in-habitants are chiefly occupied in the hat mannf. Area 70 acres. Pop. 3500.
Moreton Bay, a liay on the E. coast
of Queensland, Australia, 40 m. hy

It was discovered by Cook in 1770.

Moreto y Cabaña, Agustin (1618-69), a Spanisb dramatist, born at Madrid. He was a disciple of Calderon. His finest comedy is El Desden con el Desden (Disdain met with Disdain). but his fund of humour, bis excellent characterisation, and his animation, are also apparent in The Handsome Don Diego, the heroic Brave Justiciary of Castile, and the farcical Trampa Adelante.

Moretto, commonly known as Alessandro Bonvicino (c. 1498-c.1555), an oil, fresco, and portrait painter, born in Rovato, Brescia, Italy. He studied under Ferramola, in Venice under John Bellini and Titian; eventually he became a devoted admirer of Raphael, but it is not known that he ever visited Rome. Vasari says of his work, 'His heads are vigorous, in Raphael's style, though of very inferior excellence.' Moroni was a pupil of M. See galleries, Brescia, Florence, Venice, Verona, Berlin, Paris, St. Petersburg, Vienna, and the National Gallery, London, which contains a fine altar-piece.

Morfill, William Richard (1835-

1909), an English Slavonic scholar, horn at Maidstone, Kent. Early in life he hecame interested in languages, literature, and Siav history, and acquired a considerable knowledge of Russian. In 1900 he was appointed professor of Russian and Slavonio languages. His publications include: Slavonic Literature, a History of Russia from Peter the Great to Alexander II., contributions to the Ency. Brit., and grammars of Polish, Rus-Servian. Bulgarian,

Bohemian. Morgagni, Giovanni Battista (1682-1771), an Italian anatomist, born at Forli. In 1716 he became professor of anatomy at Padua, a position he re-tained till bis death. His reputation was made by his Adversaria anatomica, first published in 1706, and be may be considered as the founder of pathological anatomy, bis great work De Ledibus et causis morborum per anatomen indagatis, published in 1761, establishing pathological anatomy as a science. See Biography by Mo

(1768).

Morgain, or Morgue le Fay, witch of Arthurian legend, and sis of King Arthur, also known as Fata (fairy) Morgana, in the Italian rollished in 1851 The League of lite manners. In the romance of Morte d'Arthur she is the chief character, and discovered to Arthur the interest Concern with Lauguet She triguo of Genevra with Lancelot. Sho is a leading personage in other tales of chivalry, and ous traditions in connectior

17 m., which is formed inside the character have come down to us islands of Moreton and Stradbroke, somewhat confused.

Morgam, a par. of Glamorganshire, Wales, S.E. of Aberavon. Coal is found in the vicinity. Pop. about 10,000.

Morgan, Augustus de. see DE

MORGAN. Morgan, Sir George Osborne (1826-97), a British politician and lawyer, born at Gothenhurg, Sweden. Called to the bar in 1853, he published Chancery Acts and Orders in 1858. In 1861 he published a lecture on the Italian Revolution of the previous year. He was an advanced Liberal and was chosen M.P. for Denhighshire in 1868, heing returned again in 1885, 1886, and 1892. From 1885-86 he was Under-Secretary for the Colonies, and founded the Emigration Enquiry Office. He retired from office in 1892, and was created a baronct.

Morgan, Sir Henry (c. 1635-88), a huccaneer, horn in Merionethshire; the son of a farmer. Early in life he went to sea, and visited Barhadoes and Jamaica, whence he commenced to ravage the Spanish colonies. He took and plundered Porto Bello (1668) and captured Panama. Complaints were received in England from the Spanish people of S. America, and M. was ordered to return to England to answer the charges made against him. He was sent to the Tower, hut was soon afterwards released and was knighted by Charles II. in 1674, receiving the commission of lieutenant-general of Jamaica. He returned to Jamaica, where he dicd.

Morgan, John Pierpont (1837-1913), an American financier, born at Hart-ford, Connecticut, U.S.A. In 1857 he entered the hank of Duncan, Sher-man and Co., and in 1871 hecame a member of the firm of Drexel, Morgan and Co., now Morgan and Co., the great bankers of the United States. In 1901 he formed the Steel Trust with a capital of £220,000,000, and he was the controller of railways and ocean transportation lines. Ho had a vast collection of pictures and art treasures, and was a yachtsman.

Morgan, Lewis Henry (1818-81), an

Lady (c. 1783-1859), thoress, born at Dublin,

began her literary eareer with a volume of poems, which she set to Irish tunes, and then she wroto the novels, St. Clair, 1804, and The Novice of St. Dominick, 1806; followed by The Wild Irish Girl, which last established her reputation. In 1819, etc. lished her reputation. In 1812 she married Charles Morgan, M.D., whom the lord-lieutenant knighted. years later appeared her best novel, O'Donnell. During the later years of her life she published Dramatic Scenes from Real Life; Woman and her Master; The Book without a Name; and Passages from my Autobiography. See Life by Fitzpatrick.

Morgana Fata, see FATA MORGANA. Morganatic Marriage, the name given to a marriage union, otherwisc perfectly regular, between a man of the blood of a reigning royal family and a woman of lower social rank, e.g. the marriage of George IV. of England, when Prince of Wales, with Mrs. Fitzherbert. The issue of a M. M. are legitimate, though they are debarred from inheriting the rank and property

of the father.

Morgan City, a tn. and port of entry, Louisiana, U.S.A., on the E. bank of Atchafalaya Bayou, 20 m. from the Gulf of Mexico. Pop. (1910) 5477. Morgan Combine, see ATLANTIC

SHIPPING TRUST.

Morgantown, a city of W. Virginia, U.S.A., in Monongalia co., 60 m. S. of Pittsburg. The W. Virginia state of Pittsburg. university was founded bere in 1867. Pop. (1910) 9150.

Morgarten, a locality on the S.E. shore of Lake Ægeri, Switzerland. In 1315 the Swiss here defeated an army

under Leopold of Austria.

'laples. In .el's symoctry and He also of Titian, Da Vinci, combines

exquisite delicacy and remarkable clearness. In 1794 he founded a school of engraving at Florence, at the invitation of Ferdinand III., grand-duke of Tuscany. Napoleon invited M. to Paris, and made bim a more of the Institute of France. momber of the Institute of France.

from Guido. See Morghen's Engraved

Works, edited by Halscy, 1885. Morgue, La, a building in Paris, behind the cathedral of Notre Dame, where unknown bodies, either found in the streets or recovered from the Seine, are exposed for identification. After three days, if not claimed, they are buried.

Morhof, Daniel Georg (1639-91), a German author, born at Wismar. In 1660 he was appointed to the chair of poetry at Rostock. In 1665 ho became professor of eloquence and poetry at Kiel, and in 1673 he was appointed professor of history in the same university. His most famous works are: Unterricht von der deutschen Sprache und Poesie (1682), a history European systematic of literature, and Polyhistor, sive dc auctorum notitia et rerum commentarii (1688), an encyclopædia of general knowledge and science. There is a biography of M. by R. von Lilieneron in Allgem. Deutsche Biographie (1885).

Morier, James Justinian (c. 1780-1849), a traveller and novelist; secretary to the British ambassador, 1810, and during the six years of his residence in Persia he became thoroughly acquainted with the character of the natives. Published Journey through Persia, 1808-9, in 1812. The best of

his eastern novels, entitled The Adventures of Hajji Baba of Ispahan, appeared in 1824 (3 vols.).

Morier, Sir Robert Burnett David (1826-93), a British diplomatist, born in Paris, but was educated at Balliol College. Oxford, and took degree in 1849. In 1851 be entered diplomatic service, and subsequently held various appointments at German courts. His knowledge of German politics was unrivalled. In 1876 he was trans-ferred to Lisbon as English minister, which office he held until 1881, and then at Madrid from 1881-84. From 1884-91 he was ambassador to St. Petersburg, and at this time enmity sprang up between himself and Bis-marck. Attheoutbreak of the Franco-Prussian War M. was wrongfully accused by Count H. Bismarck (q.v.) of giving information to Bazaine (q.v.).

Mörike, Edouard (1804-75), a German poet, born at Ludwigsburg. Appointed professor of literature at the Katharinenstift, Stuttgart, 1851, an office be held for sixteen years. He belonged to the Swabian sehool of Uhland, and his Gedichte are, for the most part, simple lyries, graceful in style, and original in

conception. Morin (or Morinus), Jean, a French writer and theologian, born at Blois. He was a Protestant elergyman at Leyden, but was converted to Catholicism and became a priest of the Oratory at Paris in 1618. He edited the Paris Polyaott (1645), which includes the Samaritan Pentateuch and the Targum. M. claimed the superiority of the Samaritan over the Hebrew version. He also wrote a Samaritan grammar and Exercitationes on the Hebrew and Greek texts of the Bible. A Memoir of M. is

Morioka, a tn. of Hondo, Japan, 85 m. S.E. of Aomori. It is noted for

its silks. Pop. 33,000.

Morisen, James Augustus Cotter (1832-88), an English author, born in He was a disciplo of positivism, in this connection writing his last work, The Samies of Essau Toward. Future. He w

Review and Fo published: Life and Times of St. Bernard; Lives of Gibbon and and Macaulay and of Mme. de Maintenon,

Morison, Robert (1620-83), a Scotch botanist and physician. horn He took arms as Aherdeen. In rovalist and retired to France. 1650 he became physician in the household of the Duke of Orleans and a keeper of the duke's garden at Blois. Later he came to England and was appointed physician to Charles II. on the Restoration, and also professor of hotany at Oxford. His most important work is Plantarum Historia Universalis Oxonicasis. He wrote Præludia Botanica Plantarum Umbelliferarum Distributio nova, etc.

Morlaix, a seaport of Franco, off the N. coast of Brittany, cap. of the dept. of Finistere, and 33 m. E.N.E. Many of the houses date of Brest.

of Dress. Many of the houses date from the 15th century. The chief manufs, are tobacco and paper, and it trades with England in butter, eggs, cattle, etc. Pop. 16,000.
Morland, George (1763-1804), an English painter, born in London. He left his home in 1782 and ahandoned himself to a dissolute and irresponsible. himself to a dissolute and irresponslhle mode of life, which renders his artistic achievement all the more re-Indeed, deht seems to markahle. have been bis greatest incentive to His pictures deal with tho mellower aspect of domestic and rustic life, and reveal great beauty of conception and harmony of execu-tion. In his animal studies be approaches very near to Landseer. Of his many fine pictures 'The Gypsies' and 'Inside of a Stahlo' are representative. See F. W. Blagdon's Memoirs of George Morland (1806). His Life has been written by William-

His Life has been written by Wilnamson (1904) and Dawe (new ed. 1904).

Merland, Sir Samuel (c. 1625-71695),
a diplematist, mathematician, and
inventor, bern at SnihampsteadBannister, Berkshire. He was sent
on several emhassies by Cromwell to
redress the wrongs inflicted on the
Waldenses by the Duke of Savoy,
and subsequently published an subsequently published

prefixed to the Exercitationes (ed. soon became an ardent promoter of the Restoration. Charles II. appointed M. to he his magister mechanicorum, and be is credited with many important inventions, e.g. an arithmetical machine.

Morlanwelz, a tn. in the prov. of Hainault, Belgium, 15 m. E. hy raii of Monz. There are ruins of a 13tbry ahhey. There are foundries, eering works, rolling mills, and works in the town, and coal

near. Pep. 8500. Morley, a municipal bor. of the West Riding, Yorkshire, England, 5 m. S.S.W. of Leeds. Machinery and woollen goods are manufactured. There are coal mines and stone

There are coal mines and stone quarries. Pop. (1911) 24,285.
Merley, Arnold (b. 1849). an English statesman, and fourth son of Samuel M., the philanthropist and politician. In 1880 he entered parliament as M.P. for Nottingham in the Liberal interests, and sat from 1885-95 for E. Nettingham. Ho held the offices of Home Office counsel in colliery accident inquiries (1880-85), chief Liberal whip (1886-92), and Postmaster-General (1892-95). Morley, Henry (1822-94), an Eng-

lish critic and man of letters, born in London. His How to Make Home Unhealthy attracted the attention of London. Dickens, who secured him a position on the staff of Household Words and all the Fear Round (1850-65). M. was also editor of The Examiner. He was also editor of The Examiner. He was elected professor of English at King's College (1857), at University College (1858), and at Queen's (1878), and in 1882 he hecame principal of University Hall, London. He wrote the biographics of Jeromo Cardan, Cornellus Agrippa, and Clement Cornellus Agrippa, and Clement Marot. His First Sketch of English Literature commanded great popularity. He was also the editor of Morley's Universal Library (63 vols.), Cassell's National Library (214 vols.), and the Carishrooke Library. The Life of Henry Morley bas written by Solly (1898).

Morley, Samuel (1809-86), an English politician, horn in London. He was a prominent dissenter, philan-thropist, and temperance advocate. In 1865 he hecame M.P. for Notting-

(1806). In 1865 he hecamo M.P. for Notting-villiam-ham, but was unscated on petition. 1904). 1865; and was M.P. for Bristol, -11695), 1868-85. He was proprietor of the un, and Daily News, and a member of the petad-las sent Morley, Thomas (1557-1602 or 1603), nwell to an English musician, studied under on the Byrd. After heing organist at St. Savoy, Paul's, he was appointed to the Chapel ed an Royal (1592); and six years later on his how was granted a twenty-one years' asm for monopoly in music-printing, in sucaccount of bis experiences. On his ho was granted a twenty-one years return to England his enthusiasm for monopoly in music-printing, in sucthe Commonwealth cooled, and he ecssion to Byrd. He excelled as a

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composer in madrigals, but he also Diderot and the Encyclopædists, devoted considerable attention to 1878; Life of Cobden, 1881; Walpole, church music and to instrumental 1889; Life of Cromvell, 1900. composition. Some of lus work appears in the Fitzyilliam Virginal 1823, Joseph Smith told of a vision appears in the Fitzwilliam Virginal Book; and he wrote some of the original music for the productions of Shakespeare, with whom he was personally acquainted. His theoretical treatise(1597) had great coutemporary influence.

influence.
Morley of Blackburn, John Morley, first Viscount (b. 1838), an English slatesman and man of letters, born at Blackburn, son of Dr. Jonathan M.; educated at Lincoln College, Oxford; degree, 1859. He became quickly known in the literary world of Lenden, being editor of the Literary. London, being editor of the Literary Gazette, the daily Morning Star, and in 1867 succeeded G. H. Lewes in the editorship of the Fortnightly Review. In 1878 he edited for Macmillan the English Men of Letters series, his own volume on Edmund Burke being onc of the most masterly of that fine series. In 1880 he became editor of of the most masterly of that fine the series. In 1880 he became editor of the Pall Mall Gazette, on which paper Mr. Alfred (now Lord) Milner and the late Mr. W. T. Stead were members of the staff. In 1883 he was elected of the staff. In 1883 he was elected as a Liberal for Newcastle-on-Tyne; Latter-Day Saints, or shortly his intellectual weight, his powerful pen, and the influential position he held as an uncompromising exponent in the U.S.A. About 1820, while held as an uncompromising exponent living at Manchester, New York, Smith eleimed during a period of a philosophia. Padicelies mosted of philosophic Radicalism marked him for office, and in 1886, a canonised Home Ruler, he became Irish Secretary in Mr. Gladstone's cabinet, an office which he occupied again in 1892, after the defeat on Homo Rule in the general election of 1886. In 1895 ho was defeated as an anti-Imperialist for Newcastle, but was returned for Montrose Burghs. He stood somewhat apart from politics during the Unionist administration from 1895-1996, being engaged on his Life of Gladstone, published 1993, a masterpiece of political biography, but he was a strong opponent of the Boer War policy. In Sir H. Campbell-Bannerman's cabinct, 1906, M. bc-came Sceretary of State for India, in which capacity he met the outbreak of disorder with firmness, at the same time proceeding with his own plan for meeting the national demand for a widened share in the government. In Mr. Asquith's first cabinet, 1908, he was raised to the peerage, still retaining the India office, but in 1910 his age and health forced him to hand that office to Lord Crewe, while remaining in the cabinet as Lord President of the Council. M. was one of the original recipients of the Order of Mcrit at the coronation of King Edward VII., 1902. Besides the works mentioned above, he wrote: Voltaire, 1872: Rousseau,

he had received of a new gospel written on two gold plates, and after a series of other visions he claims in 1827 to have been given these plates written in 'reformed Egyptian.' He was enabled to translate this with tho aid of the ancient stones of divina-tion, the Urim and Thummim which were also given him. The translation is known as the Book of Mormon, and after this had been made the plates, etc., were returned to an angel. Unbelievers, however, have declared that the Book of Mormon is clearly founded on an unprinted book by Solomon Spaulding, to which Smith might have obtained access. Book purports to give a history of religion in the American continent from the time of Babel downwards to the 5th century A.D. It had been

Smith claimed, during a period of religious revival, to have received a vision of God the Father and God the These visions continued, and the further revelation of the Book of Mormon (q.v.) was made to him in 1827. In 1830 he founded his sect. For a sketch of its history since that date see Mormons. In 1833 the Book of Doctrines and Covenants was published. This, with the Book of Mormon, forms the basis of the Mormon belief. This is grossly materialistic. The theology reminds one at the first glance of the Gnostic systems, with its numberless gods springing from a male and a femalo deity. The hierarchy is divided into two parts, the priesthood of Melchisedec and the Aaronic or Levitical priesthood. To the former belong the first presidency, patriarch, aposties, seventies, high priests, and elders; to the latter, bishops, priests, deacons, and teachers. The former is the more exalted, and the first president is supreme. The the first president is supreme. Mormons have carried on an energetio propaganda in Europeas well as in the States. The number of them can be estimated at about (1910) 400,650. Besides works mentioned, see also The Pearl of Great Price (1851), a selection of Smith's 'revelations.'

Mormons, History of the. After the foundation of the seet in 1830, a 1873 : vigorous propaganda was carried on

much success, among the converts being Brigham Young, who succeeded Smith as first president. In 1831 the whole body of saints moved to Kirt-land, Obio, later moving further west to Jackson co., Missouri, where 'Zion the New Jerusalem' was founded. The prophet himself had trouble at Kirtland, where he managed several husiness enterprises. Here he and Rigdon, one of his ehief followers, were tarred and feathered by the mob in 1832. The people also rose against the saints in Jackson co. In 1837 the first missionary enterprise was started, England heing its object. The same year saw the failure of the bank which Smith had started. During the next year, after a conflict between themselves and the moh, the saints came into conflict with the government and were driven into Illinois. A settlement was made at Nauvoo, and the body increased so rapidly that it soon numbered 15,000. In 1841 a temple was commenced here. In 1843 Smith ineited his followers to destroy the offices of a newspaper which had written against him, and was imprisoned in consequenee at Carthage. Here the moh rushed the prison, and he and his brother Hyrum were shot. In 1845 the Mormons left Nauvoo and settled at Salt Lake City (1847), under the leadership of Brigham Young. Young died in 1877 after a period of strenu-ous conflict with natives and govern-ment. Four other presidents have succeeded him, the present one heing Joseph F. Smith. The chief opposi-Joseph I., Smith. The chici opposition to the Mormons has been provoked by their advocacy of polygamy. In theory this has now been given up, and a pronouncement was made against it by the president in 1904. See Mayhow's Life of Joseph Smith; Mackay's The Mormons; Olshausen's Geschichte der Mormonen; and Elder Orson's Letters exhibiting the most arre-Orsen's Letters exhibiting the most prominent Doctrines of the Church.

Morne-à-l'Eau, a maritimo vil. of Guadeloupe, W. Indies, a few miles from Pointe-à-Pitre, on the island of Grande-Serre. Pop. 6500.

Morning Glory, see Convolvulus.

Morning Post, a prominent Conservative penny daily, which enjoys the distinction of being the oldest of ton. He was an accomplished musician. the existing London dailies, having the existing London dailies, having Morny, Charles Auguste Louis started in 1772 as the rival of the Joseph, Comte de (1811-65), a French celebrated Morning Chronicle (see politician, born in Paris; reported to under Newspapers). It is, at present day, notable for court 'omto de M. He and social gossip, a legacy from time of the 'gallant Parson E

in the States, and was crowned with | graphs of court doings and the movements in the world of fashion, set the new paper on the high road to popularity. (See further on early history of the paper, Pebody's English Journa-lism, 1878.) Charles Lamh, Samuel Taylor Coleridge, Robert Southey, Wordsworth, and Sir James Maokintosh were noted contributors. present-day prosperity is largely the result of the industry of the Glenesk family, the first of which, Peter Borthwick, a Scotsman and member of parliament for an English constituency, undertook the management of the paper in 1847, hut died before being able to accomplish much. Hls successor was Algernon Borthwick, subsequently Lord Glenesk, who hy unremitting efforts actually freed the paper from its heavy debts which had gradually accumulated. In 1877 Borthwick became sele proprietor, and from the time he reduced its price from 3d. to 1d. the paper's success became prodigious, and its present character as a powerful Conservative organ, permeated by inspired nows of movements in fashion. able circles, was due primarily to Algernon Borthwick's own social prestige and political acumen. From 1897-1905 the paper was fortunate in having as its editor Mr. James Nicol Dunn, now editor of the Johannes-burg Star; and during the Boer War It gained a tremendous vogue from the messages of its war correspondent, Mr. Winston Churchill, who filled many columns with the account of his escape, after being taken prisoner by the Boer forces. The paper is now

> Mernington, a hamlet of eo. Meath, Ireland, on R. Boyne, 3 m. E. of Dregheda. Garrett Wellesley, first Earl of Mornington, was son of Richard Colley, first Baron Mornington, and father of the Duke of Wellington. He was educated at Trinity College, Duhlin, and in 1757 became M.P. for Trim, co. Meath, in the Irish House of Commons, going to the House of Lords on his father's death the next year. In 1760 he was raised to the peerage as Viscount Wellesley of Dangan Castle, and Earl of Morning.

omto de M. He 1830, and served he left the service

who became its editor in 1775, who became its editor in 1775, who, by his free and fearless comments upon the events of the day, no less than by his seintillating paration of 1848 ho was elected to the

supporter of Napoleon III., co-operated in the coup d'état, and became Minister of the Interior. He was Législatif president of the Corps (1854-65), and ambassador to Russia (1856-57).

Moro, Antonio, or Sir Anthony More (c. 1525-81), a painter, born at Utrecht. He studied under Titian in Italy during 1550-51, and in 1552 visited Spain. In 1553 he came to England as painter to Queen Mary, remaining till her death in 1558, when he went into the service of Philip II. of Spain at Madrid. In 1568 he returned to Holland, and settled at Antwerp. He was a popular and suc-

cessful painter of portraits.

Moroceo, or Marocco (El Maghrib el Aksa, the farthest west), the el Aksa, the farthest west, the largest of the Barbary states, with an largest of the Barbary 219,000 English sq. m., and an estimated population of 5,000,000. It is situated in the N.W. corner of Africa, its northern coast being washed by the Mediterranean, and the W. by the Atlantic; the eastern boundary with Algeria has been settled by treaty with France, and the southern, touching the Sahara, is indeterminate. The country is traversed by several parallel ranges of the Atlas Mts., the highest point being Tizin-Tagharet (15,400 t).) In the Great Atlas. The northern lopes of the ranges are well wooded, and between them lie well-watered and fertile plains. The rivers flowing rom the northern slopes of the Atlas tre perennial, and of great commerlal valuo; the Muluya, with its tribu-ary the Sharef, drains the N.E. of the country, and enters the Mediter-anean after a course of 400 m.; the sehou, by removal of a sandhank at ts mouth in 1905, was found to he ts mouth in 1905, was found to he avigable as far as Fcz (125 m.). Other rivers are the Um-er-Rebiah (230 m.), the Tensift (190 m.), the Sus, the Ghir, and the Draa, all flowing into the Atlantic. The other rivers ire lost in the sands of the desert. The Mediterranean coast is rocky, and optains many hard surface. The Mediterranean coast is rocky, and bontains many bays and inlets, inluding the bays of Alhucemas, Potuan, and Tangier, the last-named ontaining the best harbour in M. The most northerly point is the Pensula of Ceuta, dominated by the chel-Musa, one of the 'Pillars of Icreules.' The Atlantic coast is low and sandy for the most part, the yado of the ports of Larache (Elinish), Rahat (with Salli), Casalanca, Mazagan, Saffi, and Mogador groatly bampered by the lack ing groatly bampered by the lack safe harbours.

safe harbours.
The climate is good and undoubt-

Legislative Assembly, was a staunch, September to April. The temperature at Mogador generally ranges from 60° in January to 75° in August. fruit-bearing trees include the datepalms, olive, fig, walnut, orange, lemon, plum, apricot, almond, and others. Other trees are the 'Citrus,' or gnm sandarach, and the argan, found only near Mogador. Hitherto the strict prohibition of the export of grain has prevented the fertility of the soil from heing greatly utilised; the cultivation of cereals, wheat, harley, maize, and of beans, peas, esparto, and hemp is largely increasing under French influence. mineral resources of the country are known to be great, and include antiknown to be great, and include antimony, iron, coal, copper, lead, tin, and small quantities of gold and silver, but native antagonism has hitherto prevented its exploitation. The wild animals include the leopard. bear, hyena, wild pig. The bustard, partridge, and water-fowl abound. The dromedary and horse are hred extensively, and also cattle, sheep. mules, asses, and goats.

The manufs. Include leather, pottery, textiles, carpets, embroideries, copper and brass goods, silver filigree slippers, and sbawls. The chief exports, which go to the United Kingdom, France, Spain, and Germany, are cereals, wool, bides, fruit, olive oil, cattle, fowls, eggs, wax, gums, Tafilet dates, and almonds, with a total value (1911) of £3,409,837; the

are very poor on the coast, and except tho main highways to Fez and Marrákesh, scarcely exist in the interior.

Rabat, Casablanca, and Mogador. There are British, French, German, and Spanish postal agencies at the ports Fez and Marrakesb. Besides the open ports already mentioned, that of Mehedia is to be opened to commerce in 1913.

M. possesses three capitals; Fez (120,000) of the northern kingdom; Marrakesh, or Moroeco City (60,000); and Mequinez, or Meknas (56,000). The inhabitants of the country, exclusive of some 25,000 Europeans (mainly French) and Jews (300,000) composing about one-fourth of the population of most of the towns, are divided into (1) Berbers, locally known as Amazigh, the original inbabitants, who now live mainly in the mounlly healthy, especially on the At-who now live mainly in the moun-ntic coast, with a rainy season from tains; (2) Arabs, who invaded the country in the 11th and 12th cen-Moorish Empire, 1899, and The Moors, turies, and now inhabit the plains; 1902; Canal's Geographic Genérale du (3) Moors of mixed Berber-Arab de Moors 1909; The constant in the control of the control (3) Moors of mixed Berber-Arab descent, who inbabit the towns; (4) Negroes, imported as slaves from the Western Sudan, and mulattoes. Berber or Shilkah is the language of the mountain districts, but Arabio is the tongue of the towns and plains. The religion of the country is a strict form of Mohammedanism, much purerthan

that practised in Turkey and Persia.

The known history of M. begins in the 8th century with the introduction of Islam and the establishment of the dynasty of a branch of Mohammed's family, the Idrisis, contemporary 1 succession

most famand Almohades (q.v.), ended in that of Filali, originally Sherifs of Tafilet, which reigned from 1546 to the present day. Their government was an absolute despotism, opposed to all progress and corrupt in administration. European intervention has been com-pulsory at different periods, but dur-ing the latter part of the 19th century the influence of France was pre-dominant, being formally recognised by Great Britain in the Angle-French Convention of 1904. In 1905 the German emperor visited Tangier with the object, it was understood, of protesting against the Anglo-French agreement, and the tension between France and Germany became acute. In 1906 an International Conference was called at Algeeiras to define the interests of the various powers, and to establish order in M. by means of an organised police force. Between 1906 and 1911 there were various conflicts between the French troops and the liller of the property of the proper

tho Sultan Abd-el-Aziz was defeated and deposed by his brother, Mulai Hafid, who was recognised by the powers in 1909. In 1911 fresh troubles broke ont, Fez was besieged by the rebels, but relieved by the French (May 21), while a Spanish force at Larache dealt with the Riffian rebels. In July 1911 the German gunboat Panther anchored in Agadir harbour, ostensibly to protect German Interests. After protra

the Rifflan

France and evacuated ali claims to

compensation in the Chigo. in 1914 the Sultan Hafid abdicated, and was succeeded by his brother Mulai Tusef. M. is now a French Protectorate, with

Le Maroe d'Aujourd'hui, 1904 (Eng. trans.); Lorin's L'Afrique du Nord, 1906; Moore's Passing of Morocco, 1908.

Morocco, or Marrákesb, the southern capital of the Moorish empire, on the N. side of the Great Atlas range, 90 m. from the Atlantic coast, and 250 m. S.W. of Fez; has important manufs. of carpets and leather, and is the centre of the trade of Southern Moroeco. The city was founded in 1072, and had a pop. of 700,000 in the 14th century, which bas now de-elined to about 70,000. Moron, a tn. of Cuba, W. Indies, 250 m. E.S.E. of Hayana. Pop. 10,000.

Moron de la Frontera (anciont ∆rumi), a tn. of Seville, Spain, 32 m. S.E. of Seville. The district is noted

for its marble and chalk. Olivo oil is produced. Pop. 15,000.

Moroni, Giambattista (1510-78), an painter, born at Bondo, Italian Bergamo: studied under Moretto. He was especially successful in portrait-painting, and was praised by Titian. Five of his works are in the National Gallery, London, including the exceient 'Tallor.'

Morosini, an illustrious Venetian family, probably of Hungarian origin. Among the most famous members were: Domenico Morosini (doge, 1148-56), who recaptured Pola and other Istrian towns from the Dalmatian corsairs; Marino Morosini intenti corsairs; Marino Morosini (doge, 1949-52), who introduced the inquisition into Venlee; Michele Morosini (doge, 1382), a celebrated financier; Andrea Morosini (1558-1618), who hecame historiographer to at Melillathe republic (1598), was one of the Council of Ten, continued Paolo Paruta's Annali Veneti, and wrote a history of Venice, 1521-1615 (pub. 1623), and other works; and Francesco Morosini (1618-94), a great sea captain, who became doge in 1688.

Morpeth, a municipal and parl. bor. of Northumberland, England, 14 m. N. by W. of Newcastle. It has remains of a mediaval castle and gate-way; the parish church of St. Mary dates from the 14th century. There dates from the 14th century. There are large collierles in the ueighbourhood, also iron-foundries and quarries. In the town are breweries, corn mills and flannel factories. M. has one of the most important eattle market in the N. of Eugland. Pop. (1911) par bor., 63.079; municipal bor., 7436.

Morphous (from Gk. Mopon, form)

in classic mythology, the son of Sleep and Night; the god of dreams, and creator of the visions of the sleep-

Morphia, the popular name for the alkaloid morphine, C17H1,NO2. Morphine is contained in opium or the juice of poppy-heads (papaver somniferum). The opium extract is boiled with milk of lime and the product filtered. Morphine is contained in the filtrate, all the other alkaloids being precipitated. After digesting the filtrate with ammonium chioride to remove all trace of lime, the separate morphine is collected and re-crystallised from hoiling alcohol. Morphine forms colourless prisms with one molecule of water of crystallisation; it is only slightly soluble in water and in cold alcohol, and on this account is used in medicine in the form of its salts, particularly the hydrochloride. Morphine is the most effective anodyne known to science, relieving pain and producing sleep either when administered by the mouth or injected hypodermically. One grain may be a fatal dose, but persons habituated to its use are capable of taking more than 15 grains a day. The effects of the morphia habit are moral degeneration, disturbance of secretions, lowering of physical and mental powers. The habit is most difficult to break, owing to the moral weakness of the the sudden withdrawal of the drug is highly dangerous, and the only cure is the gradual diminntion of the dose under circumstances which render it impossible for the patient to obtain more than his allowance.

Morphology concerns itself only with the analysis of any organism into its parts, and is not concerned with the life which produced or is

anlsm. Thus it biology which f form or struc-

as opposed to physiology, which is concerned with the functioning of those parts described by M. Expressed in another way, M. is the 'statics' and physiology the 'dynamics' of the organism. Under biology (q.v.) it will be seen how M. leads by study of the organism through the organs; and how, by a Corresponding process in physiology (2007). concerned with organist histology, and when wit

Homology, HISTOL THEORY, and PHYSIOLOGY.

aventure College, St. John's, and the University of Ottawa. In 1884 he became a solicitor of the Supreme Court, and was called to the bar in 1885, since which year he has sat in parliament for St. John's. In 1889 he hecame a member of the cabinet, but left his party on the vote for the Reid railway contract, which he was mainly instrumental in carrying. From 1898-1900 he was leader of the Independent Liheral party, but held a seat in the cabinet from 1900-7. In the following year he became leader of the People's party. From 1902-7 he was Attorney-General and Administrator of Justice, whilst from 1909 he has been Premier of Newfoundland. He represented Newfoundland at the Imperial Defence Conference in 1909, and also at the Imperial Conference and the coronation in 1911 tion in 1911.

Morris, George Perkins (1802-64), an American journalist and author, born in Philadelphia. Ho went to New York, and in conjunction with W. P. Willis founded and edited The New York Mirror (1823), New Mirror (1843), Evening Mirror (1844), and National Press, which became the Home Journal (1845). He wrote stories and poems, including Wood-man, spare that Tree.

Morris, Gouverneur (1752-1816), an American diplomat and statesman, called to the bar in 1771. He had joined the patriotic party hy 1775, and sat in the Continental Congress (1777-80).He became assistantfinancier to Robert Morris (1781-85), after publishing a series of essays on American finances in the Pennsylvania Packet (1780), and practically founded the national coinage. helped to draw up and revise the document setting forth the U.S.A. Constitution (1787). Hethen travelled in France, England, and Germany, becoming minister to France from 1792-94. He was elected U.S.A. senator for New York (1800-3), and chairman of the Eric Canal Commission (1810). Consult Sparks, Memoirs of G. Morris, with Selections from his corresponding process in physiology Papers ..., 1832; Roosevett, Life and a linking of the two together, we arrive at embryology. When M. is newed, 1900); Duyckinck, Cyclop, of concerned with corresponding process. i.; Foreign Quarterly 1832); Diary and Let-by his grand-daughter,

Lewis (1833-1907), great-grandson of the Welsh poet, Lewis M. (d. 1765). He Morphy, Paul (1837-84), a great cless player. See CHESS.

Morris, Rt. Hon. Sir Edward, Kt., in 1861, practising till 1881. Always her education in statesman, born at St. John foundland, and educated where the statesman in the s

on the governing bodies of the three (years. After this was published M. Welsh colleges. His works include turned his attention to illuminated Songs of Two Worlds, 1872-75; The Epic of Hades, 1876-77 (which went through numerous editions); Gwent, In the carly eighties ho embraced a Drama in Monologue, 1879; The Ode of Life 1889. Ode of Life, 1880; Songs Unsung, 1883; Songs of Britain, 1887 (containing odes on the Queen's jubilee and the foundation of the Imperial Institute); Idylls and Lyrics, 1896; The Harvest-Tide, 1901; The New Rambler from Desk to Platform, 1905; A collection of his works appeared 1890-91. M. was made a Knight of the Order of the Saviour (of Greece) in 1879, and awarded a Jubilce medal (1887).

Morris, Richard (1833-94), an English philologist, born in London. He

the English at King's

at King's In 1871 he took holy orders, and from 1875-88 was headmaster of the Royal Masonic Institution for Boys in Wood Green, London. He published various works on English, the most important of which are: The Elymology of Local Names, Historical Outlines of English Accidence, Elementary Lessons in Historical English Grammar. and a Accidence, Elementary Lessons in Historical English Grammar, and a Primer of English Grammar. He was a member of the Early English Text Society, of the Pali Text Society, and of the Chaueer Society, and he edited numerous works for these societies.

Thomas (1821-1908), Morris, Morris, Thomas (1821-1805), a Scottish golfer, born at St. Andrews. He was usually called 'Old Tom' to distinguish him from his son, Young Tom M., also a famous golfer, who died in 1875. M. played golf from infancy, and was one of the foremost

players of his day.

Morris, William (1834-96), a poet, born at Walthamstow, Essex; was educated at Marlborough and at Exeter College, Oxford. At the university he read widely, and began his friendship with Edward Burne-Jones. M. was one of the originators of the Oxford andCambridge Magazine (1856), to which he contributed short stories, essays, and poems. In 1858 he published a book of verse, The Defence of Guenevere, but at this time his interest was inclining to painting and illuminating. He married Jane Burden in 1859, and built a house at Upton for himself, for which he de-signed the decorations. It was pro-bably this that gave him the idea of forming (1861) a firm of manufacturers and decorators, known as Morris, Marshall, Faulkner & Co., the main object of which was to produce artistic furaiture and to undertake artistic furnishing. In 1868 ho began to write The Earthly Paradise, and was occupied with this for two

Hammersmith the Kelmscott Press (so called after his house near Lechdale), and thence issued the magnificent and much-sought-after books. Among his writings were English verse translations of the Encid, 1875, and the Odyssey, 1887; The House of the Wolfings, 1889; and News from



Nowhere, 1891. There is a blography by J. W. Mackail (1899) and by

Compton-Reckett (1913).

Morris, William O'Connor (1824-1904), an Irish judge and historiaa, born at Kilkenny. Ho was admitted a member of Lincola's Inn in 1852, and called to the Irish bar in 1854. He was elected professor of common He was elected professor of common and criminal law in King's Ints in 1862. Owing to discrepance with Sir R. Peck, it was an and the result owners' Note to be a locally the County Court judgesblp for Louth in 1872. In 1878 he was removed to be a Kerry and he was removed to eo. Kerry, and la 1886 to the united counties of Sligo and Roseommon. Among his historical works may be mentioned: Mollke: Biographical and Critical Study, 1893; Ireland from 1798 to 1898; The Prescul Irish Question, 1901, etc. Morris (Morrice, Mourice, Mores)

Dance, an old English dance probably of Moorish origin, probably intro-duced into England by Queen Elcanor of Castilc. In Henry VIII.'s reign it formed an esseutial part of most rustic and parochial festivities. When later it was associated with the May games, the dancers frequently represented characters of the Robin Hood legend, especially Maid Marian and Friar Tuok. The hobby-horso was at one time a prominent figure in this It was suppressed by the nance. 10 was suppressed by the Puritans and never generally revived. Sec Douce, Illustrations of Shakespeare, ii., 1839; Strutt, Sports and Pastines . . . ii.; Brand, Pepular Antiquities, i., 1849; Sharp and MacIlwaino, The Merris Book.

Morrison, Arthur (b. 1863), an English novelist, dramatist, and writer on

lish novelist, dramatist, and writer on oriental art. He was formerly a journalist, and now owns a woll-known collection of Chinese and Japanese paintings, etc. His works include: Tales of Mean Streets; Martin Hewitt, Investigator, 1894; Chronicles of Martin Hewitt, 1895; Adventures of Martin Hewitt; A Child of the Jago, 1896; The Dorrington Deed-Box, 1897; To London Town, 1899; Cunning Murrell, 1900; The Hole in the Wall, 1902; The Red Triangle, 1903; The Green Eye of Goona, 1904; 1903; The Green Eye of Goona, 1904; Divers Vanities, 1905; Green Ginger, 1909; The Painters of Japan, 1911; and tho plays That Brute Simmons (with H. C. Sargent), 1904; The Dumb Cake (with R. Pryce), 1907, and A Stroke of Business (with H. W. C. Newte), 1907.

Morrison, Robert (1782-1834), tho founder of Protestant Missions in China, horn at Morpeth. Ho studied in England from 1801-7, when he was sent to Canton hy the London Mis-sionary Society. In 1809 he became translator to the East India Company. established an Anglo-Chinese He College at Malacca in 1818. He translated the Bible into Chinese (1809-19) and compiled a Dictionary of the Chinese Language, 1815-23; Chinese Grammar, 1815; and Chinese Mis-cellany, 1825.

Morristown, the cap. of Morris eo., New Jersey, U.S.A., on Whippany R., 26 m. W. by N. of New York. It is a favourite summer and health resort. Straw-board and carriages are manu-There is much fruit and factured. agricultural produce. Pop. (1910)

12,507. Morris Tubes are contrivances for converting an ordinary rifle into a miniature rifle for short-range practice, or a shot-gun into a small-bore They consist of a small rifle barrel, and are usually chambered for tbe 297/230-borccartridgo. They have

Office, as they can he fitted to the usual service rifle, and are thus very useful for training recruits and where long ranges are not available.

Mors, or Morso, an island of Denmark, off the W. ceast of Jutland, in the Lum Fjord. Chief town is Nydjobing. Length 22 m. Pop. 18,50d.

Mors, a tn. of Prussia in the Rhine prov., 17 m. W. of Essen. Pop. 23,255. Morse, Samuel Finley Breese (1791-1872), inventor of telegraphic system, born at Charlestown, Massaehusetts, U.S.A. In 1811 he went to England to study art under West, and gained a gold medal in 1813 for a statue. He returned to America in 1815, and was first president of the National Academy of Design, New York, during 1826-42. He also studied chemistry and electricity, and in 1832 conceived the idea of a magnetic telegraph. In 1843 Congress granted \$30,000 for an experimental telegraph line between Washington and Baltimore, and M.'s system was soon widely adopted. See Life by Prime (1875).

Morshansk, a tn. of Central Russla, in the gov. of Tambov, 58 m. N.N.E. of the city of Tambov. It is a trade centre for wheat grown in Tamhov, Penza, etc., and there are several flourmilis. storehouses, distillories. The manufs. are glue, tallow,

scap, malt, etc. There is a fine cathedral. Pop. 28,000.
Mortality.—The law of mortality:
In actuarial calculations the law which, founded on the average M. for any given number of years, de-termines the proportion of persons who die in any assigned period of life or interval of age out of a given number who enter upon the same interval.

Bills of \cdot parish regi of persons th ialı during certain periods of time, and denominated according to the period taken, weekly, monthly, or yearly bills. They originated in London at the end of the 16th century, during the time a plague epidemic was rav-aging the city, and have been pub-lished regularly from shortly after that year till the present time. See also STATISTICS.

Mortar was the name of a short piece of ordnance, with a very wide borc, the width of which very often more than equalled the length of the It had trunnions on the breech, and was mounted so as to throw the shell at a high angle (generally about 45°). Ms. were especially useful in sieges, as they dropped their shells over the walls; the range was regulated by the amount of powder used. The usual type of M. was muzzlebeen adopted by the British War loading, and had a smooth boro of 5½, 8, 10, or 13 in. calibre. In modern times howitzers (q.v.) is the name given to short guas of similar type, although a very short howitzer is

sometimes called a M.

Mortar (Lat. mortarium), a material used to bind together the hricks and stones of a building. The use of such a material dates hack from early times. M. is a mixture of lime with water and sand. The sand is placed on the mixing platform, and formed into a ring, into which the required quantity of lime is placed. The whole is then well sprinkled with clean water, the sand turned over the lime, and it is left to 'slake' for a day or two, when it is well mixed up. It is preferablo to leave the M. for some little time after mixing, until it is 'tempered.' 'Hydraulic mortar' is a name somotimes given to M. which hardens in water (as opposed to ordinary M., which hardens only in air), but this is really cement (q.v.).

but this is really cement (q.v.).

Mortara, a tn. of Italy in the prov.
of Pavia, 25 m. S.W. of Milan. The
Austriaas gained a victory over the
Sardialans here in 1849. There are
iron works and manufs. of machinery.

Pop. 8700.

Mortara, Edgar, a Jowish boy who in 1858 was forcibly carried away from his parents by the Archbishop of Bologna oa the grounds that he had been baptised in intancy by a Roman Catholic nurse. The opiscopal authorities refused to give him up and he hecame an Augustinian.

monk.

Mortar and Pestle. The mortar is a vessel in which substances are ground to fragments or pulverised by heating with an instrument called the pestle. They are made of various substances according to their use. Glass, agate, flint, porphyry, stoneware, or eastion is generally used. Glass and stoneware mortars are used in the laboratory for analytical work, agate is used when the substance is to be reduced to a very fine powder, whereas iron mortars are employed for crushing coarser substances.

Mortar-vessel, a special class of gun-boat for mounting sea-service 'mortars' (artillery). The oldest form was the bomb-ketch, whose great convenience was the length of deck without a mast. A smaller variety was called a mortar-boat. These kinds of bomh-ships have

deek without a mast. A smaller to the land (see Limitations, variety was called a mortar-boat, tartutes or). (3) To apply, after the experience of both ships have eased to exist in the British Navy.

Mortgage, the transfer of land or other property as security for the repayment of a loan. It is to be distributed both from a hypothecation and a pawn or pledge. In hypothecation and a pawn or pledge. In hypothecation the creditor has rights over the cation that the court for a forcelosure order, i.e. an order fixing a further period (generally six months) within which interest and costs, or be for ever force the cation that the court for a forcelosure order, i.e. and order fixing a further period (generally six months) within which interest and costs, or be for ever force the court for a forcelosure, order, i.e. and order fixing a further period (generally six months) within which interest and costs, or be for ever force the court for a forcelosure, order, i.e. and order fixing a further period (generally six months) within which is the court for a forcelosure, order, i.e. and order fixing a further period (generally six months) within which is the court for a forcelosure order, i.e. and order fixing a further period (generally six months) within which is the court for a forcelosure, order, i.e. and order fixing a further period (generally six months) within which is the court for a forcelosure order, i.e. and order fixing a further period (generally six months) within which is the court for a forcelosure order, i.e. and order fixing a further period (generally six months) within which is the court for a forcelosure order, i.e. and order fixing a further period (generally six months) within which is the court for a further order fixing a f

The term in Eaglish law is practically confined to a master's (a.v.) power to raise money on his ship or eargo for necessary purposes (see also Bottomers), but is a common form of security in Scots law (see Hypothes). In the case of a pledge of goods, possession is given to the pawnee, and herein it differs from a true M. of chattels by bill of sale (a.v.). Under a bill of sale to secure a debt, the property in, but not the possession of, the scheduled goods and chattels passes to the grantee, subject either to a condition eancelling the transfer on performance of the condition to repay the loan with interest, or to a provise enabling the grantor (debtor), to redeem his property by such payment and at once to have it reconveyed to him.

Mortgage of land.—A legal as distinct from an equitable M. (q.v.) is created by ϵ

full owners; in it to the mortgagor's

imorgagor:
a right to have his land hack again
on payment of the principal money
and interest. Most Ms. include an
express covenant (q.v.) on the part of
the mortgagor personally to repay the
loan, but such covenant is obviously
only useful where the mortgagor has
moaey with which to repay, and,
generally speaking, the mortgagee
only sues oa it if the land hecomes
less valuable and iasufficient to secure
the loan. The rights of the mortgage
are: (1) To sue on the covenant to repay at any time after the expiration
of the period (usually six months)
fixed for payment. (2) To enter inte
possession of the land at any time;
though usual!

the mortgage goes into possession he will be called upon to account strictly not only for the rents and profits received by him, but for all he might have received if he had exercised the atmost care. When in possession he may make building leases for ninetynine years, or occupation leases for twenty-one years. If he remain his possession for twelve years without acknowledging the title of the mortgager, he becomes absolutely entitled to the land (see Lahitaations, Statutes or). (3) To apply, after the expiration of the term for repayment, to the court for a foreclosure order, i.e. an order fixing a further period (generally six months) within which the mortgager must pay the principal interest and costs, or be for ever forelosed of his equity of redemption. (4) To sell the land, and out of the prepared to meant the costs.

which right is less stringent than a university boat race. Malting is the forcelosure, because the mortgagor is local industry. Pop. about 7774. entitled to the surplus proceeds. But there is no right to sell unless either (a) the mortgagee has given three months' notice in writing demanding payment and stating his intention to sell if the money be not paid; or (b) some interest is two months in arrear; or (c) there has been some breach of the oovenants in the deed, other than that for the repayment of the loan. A right to sell is implied in a M. deed, and, therefore, no order of court is required. (5) To appoint a receiver of the rents and profits to apply the same in payment of debt and interest. The mortgagor's rights, so far as not impliedly stated above, are: (1) If in possession to make building and occupation leases for ninety-nine and twenty-one years remerically (2) the redeement. spectively. (2) If he redeems, to get his land back free from all restrictions whatever. (3) If he remains in possession for twelve years without paying any part of the principal or interest to ignore the mortgagee's rights

Mortification, a Scots legal phrase applied to lands given for charitable or public uses. Ms. for the benefit of the poor generally fall under the administration of the heritors (q.v.) and kirk session, while lands given for any charitable purpose are disponed to trustees to be held in blench or feu. The Court of Session has jurisdiction to control the management of the administrators of Ms. The term is practically synonymous with

English mortmain (q.v.).

altogether.

Mortimer, Roger, first Earl of March (c. 1287-1330), about 1304 he March (c. 1287-1330), about 130% ne succeeded his father, the seventh baron, as Baron of Wigmore, and in 1306 was knighted. In 1316 he was appointed Lieutenant of Ireland, and in 1317 drove Bruce to Carrickfergus. and defeated the Lacys. He became Justiciar of Ireland in 1319, fought for his uncle, Roger, in Wales in 1320, and in 1322 was captured and sent to the Tower. He escaped to Paris in 1324, and became chief adviser to Queen Isabella. In 1327 he became Justiciar of Wales. In 1330 he was accused of treason and complicity in the death of Edward II., and other charges, and executed at Tyburn.

Mortlake, a vil. in Surrey, England, m. from London, on the L. and 61 m. from London, on the L. and S.W.R. The church of St. Mary the Virgin, founded in 1348, rebuilt in 1843, and often enlarged, contains memorials to Sir Philip Francis and Sir John Temple, besides many tombs of celebrities, notably of Dr. John Dee, philosopher and astrologer. The Ship Hotel is notable as the finishing point of many an inter-

Mortmain. An alienation of land in M. or in mortua manu denotes the transfer of land into the dead hand either of the Church or any other corporation (q.v.), and was so called from the fact that the immortality and other non-human attributes of corporations necessarily prevented the lands in their possession from ever being profitable either to the king or to the immediate feudal lords of those who had alienated them, because there was no possibility of escheat (q.v.), reliefs, wardships, marriages, or any other feudal aids. The learning any other feudal aids. The learning on the subject of M. is almost as purely antiquarian as that of feudal aids, but is still of some practical importance from the fact that though the same reasons do not now exist for prohibiting the conveyance of land to a corporation, and though there are numerous statutory provisions by which almost any corporation can hold land with or without a royal licence, the Mortmain Acts of 1279, 1391, 1888 are still in force. Early in the history of English real property law, the conveyance of land was next to impossible, but even when most of to impossible, but even when most of the feudal restrictions on alienation had been abolished, it still remained, and in the theory of the common law still remains, impossible for a cor-poration to purchase land without a licence. The only justification for such a prohibition at the present day is the objection to proventition of a is the objection to perpetuities, or in other words, virtual withholding of land from the open market. ancient reason of the prohibition was, as indicated above, the fact that the feudal tenant who so got rid of his land could not therefore be made answerable for the various oppressive incidents attached to its ownership. For the most part landowners conveyed their lands to the Church or some other ecclesiastical corporation, e.g. a monastery, and those who are eurious to know more of the early history of the subject will find in Blackstone's Commentaries an instructivo account of the long pro-tracted duel between the legislature and the ecclesiasties, in which the skill of the lawyers employed by the latter was hardly ever at a loss to invent some device to outwit the provisions of the Mortmain Acts (e.g. the common recovery was in its origin an ecclesiastical weapon for thwarting the Mortmain Acts: see under Common Recoveries). At the present day numerous corporations can hold lands in M. without either a licence from the crown or the authorisation of a public or private Act of Parliament. Every registered joint-stock com-

panies Consolidation Act, 1908, or the Acts consolidated in that Act) formed for the acquisition of gain may hold lands for the purposes of the business of the company; hut no company formed to promote art, religion, science, or charity, or for a non-lucrative purpose can hold more than of the Board of Trade. Charity trustecs may be incorporated under the Charitable Trusts Acts, and may then hold lands without further licence. Under the Public Health Act, 1875, the Municipal Corporation Act, 1882, the Local Government Acts, 1888 and 1894, municipal corporations, county councils, and other local authorities are empowered to hold lands for the purposes of those Acts. Railway, gas, water, and tramway companies may also hold land under their respective private Acts.

Under the Mortmain and Charitable Uses Act, 1888, every conveyance of land, or grant of money to be laid out in land, for charitable uses deep the death of the grant and the land of the grant of the case of copyhold and or stook in the public funds; (2) made at least twelve months, or, if stook in the public funds; (2) made at least twelve months, six months before the public funds, six months before the grant or of the death of the grantor; (3) the assurance takes effect in possession without power of revocation or condition in favour of the grantor except a easements. reservation of mines nominal rent, and repairing covenants. If, however, the assurance is made bond fide and for valuable consideration (q.v.), (1) and (2) do not apply. There are exemptions from the above restrictions in the case of Oxford, Cambridge, London, Durham, and Victoria universities, and in favour of gifts not exceeding 20 acres to public parks, 2 acres to muscums, and 1 acro

orders.

Morton, James Douglas, Earl of (d. 1581), regent of Sco-In 1557 he subscribed the first of the Scottish reformers, hut drew his support in 1559. Mary Queen of Scots arrived in land he hecame privy equacillo: was instrumental ia suppr-Huntley's conspiracy in 1562, was made lord chancellor in 1563, president of Morton Trust Co., 1899. He offered no opposition to the marriage of Mary with Darnley, instigated 1851), an American physician and the murder of Rizzlo, and joined ethnologist, horn at Philadelphia. In

pany (incorporated under the Com-! Ruthven and Hamilton in settling the crown matrimonial upon Darnley. In 1566 Darnley denounced him and he was obliged to flee, but later in the same year was pardoned through the influence of Bothwell, for whose marriage with Mary he signed a hond in 1567 He then roused the citizens of Edinhurgh against Bothwell, but two acres of land without the sanction allowed him to escape, and brought nhout the queen's imprisonment at Lochleven. Ho became lord chancellor and a member of the Council of Regency, in which capacity he acted as adviser to Moray, and practically ruled the country during Lennox's regency. He gained the favour of Elizabeth, and induced many preminent men to desert Mary's cause. 1578 James VI, assumed the government, but a parliament held at Stirling Castle re-established M. at the head of affairs. He was executed in 1581, having been convicted of the charge, brought by the Earl of Lennox, of being privy to Darnley's

murder. Morton, James Douglas, Earl of (1707-68), a Scottish nobleman and patron of arts and sciences. At the age of twenty-five founded a philosophical society in Edinburgh, which, later, hecame prominent in almost all hranches of knowledge. Elected president of the Royal Society of London in 1733 and, on the death of the Earl of Macelesfield, elected an associate in the Academy of Sciences Had considerable knowat Parls. ledge of natural and experimental philosophy, but was more partidevoted to science

especially astronomical observations. Mortea, John Maddison (1811-91), an English dramatist, born at Pangbourne, Berkshire. His works, mainly. farces and often adapted from the French, were very popular, and included My First Fit of the Gout, 1835: Grimshaw, Bagshaw, and Bradshaw; To Paris and Back for Five Pounds; Box and Cox, 1847; and Going it at

3

For and Ucz, 1847; and Going u ar Toole's Theatre, 1885. Morten, Lovi Parsens (b. 1824), ex-President of U.S.A., born at Shor-ham, Vermont, U.S.A., and graduated at Shoroham Academy. M. entered a bank at Boston in 1850; success

1839 ho hecame professor of anatomy in the Medical College of Pennsylvania, after practising as a doctor for nineteen years in Philadelphia. His special study was craniology, and he made a remarkable collection of skulls, hesides writing Crania Ameri-cana, 1839, and Crania Egyptica, 1844.

Mortuary. A local authority may provide and fit up a proper place for the reception of dead bodies before interment, make by laws with respect to the management and charges for the uso of the same, and provide for the decent and economical interment of the dead hodies received into any If a local authority do not such M. provide a M. voluntarily, the Local Government Board has power to re-quire them to do so. The local authorquire them to do so. The local authority may also provide a post-mortem examination chamber, which, however, must not be at a workhouse or at a M. County councils have concurrent powers to establish Ms. for the reception of unidentified dead bodies, and to require borough councils to provide post-mortem chambers. Any local authority having nower to Any local authority having power to provide a M. may purchase by agreement, or hy compulsion, or take on lease, any land or buildings they may require for a M. See BURIAL, LAWS AND CUSTOMS OF.

Morumgao, the chief part of terri-tory of Zoa in Portuguese India, 260 m. from Bomhay. Manganese ore is

worked in the vicinity.

Morvern, a par. and peninsula of Argyllshirc, Scotland, lying between Locis Suuart and Linnhe. Area 90,737 acres. Pop. about 1000.

Morvi, a small feudatory state of Kathiawar, Bomhay, India. Area 821 sq. m. Pop. 106,000. The town is 110 m. S.W. of Ahmadabad. Pop. 18,000.

Moryson (or Morison), Fynes (1566c. 1630), a traveller. He visited Germany, the Low Countries, Poland, Italy, Switzerland, and Franco (1591. 95), and Palestine, Constantinople, and Scotland (1598). In 1600 he went to Ireland, became secretary to Sir

Charles Blount, and helped to suppress Tyrone's rebellion. Mosaic, a variety of surface decora-tion, used largely on floors and walls. In M. work variously coloured fragments of marble, glass, ceramic, or other substances are arranged in a cement or mastie bed so as to produce an artistic or geometrical design. The art goes back to a very remote origin, but it reached its highest development in ancient times among the Romans. Very for all Property of the control of the contr Very few old Roman villas remain in which there is not some M.

where Pliny's doves are represented with wonderful delicacy of colouring. The tesseræ (the small fragments of which the M. is composed) have varied considerably in size at dif-ferent times. The Roman tesseræ measured from a quarter to half an inch in size, but those used in the later 14th-century Italian work were frequently under one-eighth of an inch. M. work became a special feature of Christlan churches under the Byzantine empire, and Eastern influence is clearly to he seen in the Roman work. In the East the art is continued down, to the 13th century. In the West the art deelined in the 7th century, revived again in the 8th for about a century, but then fell away again until the 14th century. In this later work M. can hardly be considered as an art in itself. See Gerspach. La Mosaigue, 1885; Garrucci's Storia dell' arte cristiana, 1873-81; A. Salviati's On Mosaic, 1862.

Mosaic Gold consists of stannic sulphide (SnS₂). It is prepared hy heating together a mixture of very finely divided tin with sulphur and ammonium chloride. It is obtained in golden spangles. It is used exten-

sively for imitation gilding.

Mosaylima, or Moseilema, a contemporary and rival of Mohammed, claiming to have equal rights with him to the title of 'Messenger of God.' He stated that Mohammed had nominated him his successor, but his claim was not acknowledged by the

Moslems. He was killed in 643 hy Khalld, a general of Ahu Bekr. Moscheles, Ignaz (1794-1870), a Bohemian pianist and composer, horn at Prague. In 1820 he toured Germany, Holland, France, and England, giving concerts, and in 1825 settled in London as professor at the Academy of Music and director of the philharmonie concerts. In 1844 he, phintarhonic conterts. In 1044 nc, together with Mendelssohn, hecame leader of the Leipzlg Conservatoire. His Life, hy his wife, appeared in English in 1873, and his correspondence with Mendelssohn in 1888.

Moschus, a Greek bucolic poet, was a natide of Syracuse, and flourished in the 2nd or 3rd century B.c. Nothing is known of his life. His works are generally printed together with those of Theocritus and Bion. Only four Idylls and some fragments are extant, all but one written in the Doric dialect, and remarkable for their heauty. They have been translated into English prose by Andrew Lang (1889).

Moscow: 1. A gov. of Central Russia, lies immediately S. of the governments of Tvcr and Vladimir. Area 12,847 sq. m. The surface is work of a greator or less degree of covernments of Tvcr and Vladimir. claboration. The best-known example is that of Hadrian's villa at Tivoli, level with the exception of a tract in

the S.W.; which is elevated. It is burg; the church of the Annunciation, watered by the Moskva and the the floor of which is paved with Kliazma, while the Oka forms a portion of its S. boundary. The soil, yarious shapes; the tower of Ivan principally clayer, with some sandy and stony tracts, is, on the whole, unfertile, and harely supplies local consumption. None of the governments of Russia, however, equal that of M. in manufactures and general interests. dustry. It contains numerous cotton, dustry. It contains numerous cotton, cloth, slik, hrocade, chintz, paper, leather, perfumery, furniture, carriage, and other factories. China-ware is manufactured from the clay dug up in the district of Gjelsk. White limestone is quarried, and is much used for huilding in the capital; yellow marble quarries occur on the banks of the Oka. Peat is extensively nsed as fuel in the factories. Among the places historically celebrated are the places historically celebrated are the monastery of St. Sergius, founded hy one of the first Muscovite princes, and famous for its silver shrine, said to he the richest in the world; and the village of Borodino (q.v.). Pop. 3,215,400. 2. (Russian Moskvá.) The ancient cap. of Russia and formerly the residence of the czars, is situated in a highly-cultivated and fertile district on the Moskva, 400 m. S.E. of St. Petershurg, with which it is in direct communication hy railway. Previously to its heing burned in 1812, M. was perhaps the most irregularly built oity in Europe, and that dis-tinction to a great extent it still retains; for, as the main object in 1813 was to build speedily, the streets rose again on the old model, undulating and crooked, and consisting of alternating houses, the most varied in character and pretensions. Its hundreds of churches and convents, surmounted by gilt or variously-coloured domes; its gardens and boulevards; and, above all, the high walls and crowded yet stately towers of the Kremlin or citadel, produce a most striking effect. The Kremlin, situated on the northern bank of the river, forms the centre of the town, and around it, with a radius of about 1 m., is a line of boulevards, extending, lowever, only on the N. side of the river. Outside of this line, and concentric with it, is another line of boulevards, with a radius of 1 m., while beyond all, and forming the circle of the city is the outer rame. girdle of the city, is the outer rampart, with a circumference of 26 m. The Kremlin comprises the principal buildings, as the cathedral of the Assumption of the Virgin, founded in 1326, a small but gorgcously de-corated edifice; the cathedral of the corated edifice; the cathedral of the Rhino, rises in the S.E. of the dept. Archangel Michael, containing the of the Vosges, France, in two head-tombs of all the czars time of Peter the Great. hrough the dept. Meurthetombs of all the czars time of Peter the Great. the royal burial-place to

jaspers, agates, and carnelians of various shapes; the tower of Ivan Veliki, 200 ft. in height and surmounted hy a magnificent gilded dome, from which, as from all the domes of M., rises the 'honourable areas' the Carl Velokal (high of helle) cross'; the Czar Kolokol (king of bells), the greatest bell in the world; several palaces, and collections of ancient arms and other antiquities. The walls of the Kremlin are surmounted by eighteen towers, and pierced with five gates. M. has a university. It is the seat of an extensive manufacturing and commercial industry: it imports largely and carries on a considerable export trade, especially with Asia. Its trade is chiefly in hides, leather, oils, wool, grease, isinglass, wax, honey, feathers, and down, potass, soap, iron, and copper; cotton from Asia, silks from Geergia, Persia, and Bokhara; Caucasian madder, home and Turkish tobacco, for the chomical rurkish tobacco. madder, home and Turkish tobacco, furs, tea, chemicals, and all the products of Russian manufacture, of which M. is the actual centro. The other principal branches of manufacture are tanning and skin-dressing, iron, copper, and silver works, and chandleries. Pop. 1,481,200. M. was settled by Great Russians in the 11th century. In the 14th century, not only had it become the capital of the Russian religious world, owing to the Russian religious world, owing to the residence there of the metro-politan, but it had also become the actual capital of Muscovy. Iu 1368, 1370, and 1372 it suffered from the inroads of the Lithuanians; in 1381 lt was sacked by the Tartars. 1415-1501 it was, on four separate occasions, partially destroyed by fires, and it was burned to the ground by Devlet-Girey, Khan of the Cri-mean Tartars, in 1571. It was taken by the Poles in 1610, and romained in their possession till their expulsion by the Russians under Minin and Pojar-sky in 1612. In 1682, 1689, and 1698 it was the theatre of the revolts of the Strelitz. In 1812 it was burnt by its own inhabitants to prevent it falling into the hands of the French.

Moselle, or Mosel, a kind of light wine obtained from the valley of the

Mosclle. It

flavour, not ' The vines me Moselle are Kleinberger, are those of Picsport, and

Moselle, o:

and Alsace-Lorraine, and

joins the Rhine at Coblenz. Its chief tribs. are the Mourthe in France, and the Saar in Germany. It is navigable from Frouard. Length, 320 m.; area of basin, 10,950 sq. m. Tower, The Moselle, 1913. See Charles

Mosely Commission, the name given to the commissions of inquiry sent out in 1902, 1903, and 1906 by Sir Alfred Mosely, C.M.G., to study the educational and labour systems in voguo in the U.S.A. Two commissions are the U.S.A. Two commissions are the U.S.A.

sions were projected in 1902—the educational commission, which was to make a special study of the commercial and industrial organisation of the U.S.A.; and the labour commission, which was to devote its attention to problems relating to capital and labour, the methods of production, and the progress of trade unions. The labour commission went out in the autumn of 1902, and the educational in 1903. Only trade union delegates were invited to go out on the labour commission, the investiga-

tion being entirely non-political. The reports were published in 1904. Moser, George Michael, R.A. (1704-83), a Swiss chaser and enameller, born at Sohaffhausen, but spent most of his lite in England, where his watches and bracelets were in great He was drawing-master to request. George III., and assisted in establishing the Royal Academy, of which ho was elected the first keeper in 1767.

Moser, Mary (d. 1819), a flower painter, daughter of George Michael M. She was a foundation member of

the Royal Academy

Moses (Heb. Mosheh, Gk. Μωυσῆς), the great Jewish lawgiver and judge, brother of Aaron and Miriam. The records of his life and work found in the Pentatcuch are very meagre, and if, as is now generally believed, the 'Books of Moses' were not written until some 800 years later, are probably to a great extent legendary (see Exodus, Numbers, and Deuteronomy). He was said to have been born in Egypt of the tribe of Levi, and be-cause at that time Pharaon had decreed that every male child of the Hebrews should be destroyed, his mother Jochebed placed him in an ark upon the Nile, where he was found by Pharaoh's daughter, and adopted by her. Brought up as an Egyptlan prince, his heart was yet Egyptian prince, his neart was yet with his own people, and finding an Egyptiau oppressing a Hebrew, he slew the Egyptian and then, for safety, fled into Midian, whence he received a divino call to return and lead the chosen people out of Israel. (For the history of the plagues, the crossing of the Pad Sea and the fate of the history of the plagues, the crossing of the Red Sea, and the fate of the Egyptians, see Exodus.) For forty

and religious organiser, and lawgiver to the turbulent tribes in the desert wanderings, finally dying on Pisgah, or Mt. Nebo, to the N.E. of the Dead Sea. For the details of his life recor-ded in the Pentateuch there may be insufficient historical foundation, but the deliverance from Egypt, his code of moral and social laws, his unwaver-ing upholding of Jehovah as the one God, and his conquest of the land E. of Jordan, must be accepted as facts. See Rawlinson's Moses, his Life and Times, 1887, in Men of the Bible Series; Robertson Smith's Old Testament in Jewish Church; Oosterzee's Moses (Eng. translation 1875).

Moskwa, a river of Russia, traversing the dist. of Moscow, and passing Moscow and Mozhaisk. It joins the Oka at Kolomna, after a course of

300 m.

Mosman, a suburb of Sydney, New South Wales, lying on the N. side of the entrance to the harbour.

Mosque, a Mohammedan house of prayer. The form of the eldest Ms. (at Jerusalem and Cairo) is evidently derived from that of the Christian Basilica. The original forms became, however, entirely obliterated in the progress of Mohammedan architecture, and the Ms., with their arcaded courts, gateways, domes, and minarcts, became the most characteristic edifices of Saracenie art. Wherever the Mohammedan faith prevailed, from Spain to India, beautiful examples of these buildings exist. They vary considerably in style in different oountries, the Saracens generally borrowing much from the architecture of the various nations who adopted their faith. In India, the Ms. have many features in common with tho temples of the Jains, while in Turkey they resemble the Byzantino archltecture of Constantinople. where the dome is one of the leading and most beautiful features of the Ms., which commonly consist of porticoes surrounding an open square, in the centre of which is a tank or fountain for ablution. Arabesques and sentences of the Koran are inscribed upon the walls. The floor is covered with mats or carpets; there are no seats. In the S.E. is a kind of pulpit; and in the direction in which Mecca lies there is a niche towards which the faithful are required to look when they pray.

Mosquitoes, or Gnats. These terms have no distinction, applying alike to those dipterous insects which form the family Culicidee, characterised by their long, slender, horny proboscis. The antenne are long and adorned with plumes or whorls of hairs, which in the males are so dense as to be years he was military leader, social feather-like. Only the females, which

species of the

in temperate

do not take part in the characteristic; the vegetable kingdom. dances, suck blood-apparently an abnormal habit which, according to

painful as of foreign species owing to the absence from Britain of ague and malaria, which are introduced by biting gnats (Anopheles), there is not the same danger. larval and pupal stages are aquatic, and the numbers of Ms. can be sub-

id, or ir by in on

the surface of the water, which effectually prevents the larve from inhaling air, and eauses their suffo-

cation.

Mosquitos, natives of the Mosquito coast, i.e. the eastern or Atlantic They easterr aro of . natives married with W. muun Conibs and shipwrecked negro slaves, while there is also a strain of white blood, dating fre ge. an

tŢ gent. Many are nominan. water in the plant. Among and most of them speak English. A the genera of this group is Buxthe M. during 1655-1850, and friction with the U.S.A. on the score led to the Clayton-Bulwer Treaty. They are now under Nicaraguan rule.

Moss, a maritime tn. of Smaalenene prov., S. Norway, on Christiania Fjord (E.), 12 m. from Tönsberg. Timber is exported, and there are There is a good iron-mines near. The convention between one king, was annulled 1905. 9000.

Mossamedes, a seaport of Angola, Portuguese W. Africa, on Little Fish Bay, an excellent harbour. The dist. produces cotton, sugar, and fruit.

Pop. 5000.

Mossel Bay, a scaport (free port) and bay of Cape of Good Hope, S. Africa, bounded W. by Groote R. The town (formerly Aliwal S.) is 25 m. from Georgetown. It ranks fourth in importance among the ports of the is common, be Cape. Pop. 5000.

Mossend, a tn. of N.E. Lanarkshire, Scotland, 3 m. N.E. of Hamilton, with extensivo iron and steel works. Pop. 3500.

They are arranged in three sub-groups, Sphagnates, Andrewates, and Bryates, and while the last named comprises a great number of genera and species, the others are removement of each only by a single

at high levels all bog or me growth has contributed greatly to the formation of peat. They are usually seen as pale green or reddish patches, and in the deeper pools often attain a length of several feet. About a dozen species occur in Britain of the genus Andreæa; less than half a dozen species have been found in Britain, and they are limited to alpine districts. They are small M. of dark colonr, and grow on bare rocks in tufts. The sub-group Bryates com-prises all the other M., which in

original genera. Though they conform to a general type, they exhibit great variation in many respects. Their habitat varies from soil, trees, and other lood, dating damp places, and even in one gonus. There are under water, to comparatively dry in physical rocks. They oxhibit many interesting dred species and over a hundred

Britain alone number some six hun-

to their environment, a their arrangements for

British protectorate was claimed over baumia, which seems to represent a stage that other M. have passed, and is regarded as the simplest type. most M. the protonema, the first stage, arising from the spore, disappears after the young M. plants have developed from it, but in Bux-baumia, as well as some other simple types, it persists, and is capable of assimilation, and the small plants which bear the antheridium and Norway and Sweden signed here archegonium (male and femaloorgans) (1814), uniting the two states under are dependent upon it for nourish-Pop. ment. From this primitive stage to that in which the plants are small, radical, and but little branches, and to that in which the plants branch freely and differentiate the shoots, there is a fairly steady graduation. The specialisation of structure is mainly directed towards collecting and retaining as much water as possible. The sexual organs usually occur at the top of the main shoot, or of branches. V protonema

growth of M. formation of numerous plants on the

original protonema. Pop. 3500.

Mossley, a municipal bor, and market in, of Lancashire, England, which with the liverworts (Hepatlew) on the Tame, 3 m. from Oldham. form the second great sub-division of There are woollen and cotton mills,

a pier available for small vesseis, and trades in horses, cercals, flour, and carpets. Pop. 20,000.

Mostar ('old bridge '), a tn. and former cap. of Herzegovina, Austria, on the Narchta, 50 m. S.W. of Serajevo. It is the scat of a Greek and Serajevo. It is the source that is of a Roman Catholic bishop. It is Tobacco and weapons are manufactured. Pop.

16,390.

Most Favoured Nation Clause, a clause that is often inserted in commercial treaties, the effect of which is that the one contracting nation guarantees to extend to the other the benefits conceded to any third nation or nations. Generally speaking, a treaty concerns none but the contracting states, and neither rights nor duties arise for states which are not parties to it. But treaties necessarily affect third states when they touch the previous treaty rights of such third states, and the most obvious instance of such an effect is in the case of a commercial treaty between A and в relating to matters which are arready the subject of previous treaties between A and C, or B and C, containing the M. F. N. C.

Mosul, a walled tn., cap. of vilayet and sanjak of Mosul, Asiatio Turkey, on R. Tigris, 220 m. N.W. of Borded

The streets are narrow and

and the houses of stone or bi flat roofs. manufs. of cotton cloths, muslins,' from the name of the town. There is still caravan traffic in gallnuts, cotton, wool, hides, wax, and gum. On the opposite bank of the river are the remains of Nineveh. Pop., mostly Arab in speech, and including Mohammedans, Christians, and Jews, 90,000.

Motaia, a tn. of Ostergötland prov., Sweden, on Lake Wotter, 42 m. W. of There are important Nörrkoping. mechanical works, cannon foundries, bridge and engine works, and machine

shops near by. Pop. 2908.

Motanabbi, Abu-'i-Tayyib Ahmed-name is also given to ibn-Hosain (915-65), an Arabian (Arlemisia vulgaris).

poet. In 945 he set up claims to bo a Moths (Heterocera) are the prophet, but was arrested and imprisoned, and spent the rest of his life as a kind of court poet to various princes in Arabia, Persia, and Egypt. His work is mainly panegyrical or satirical, and his collected poems were published with an introduction by J. von Hammer in 1824.

Motazilites, a Mohammedan sect founded by Wazil-ben-Ata two con-turies after Mohammed. They denied predestination, and also the possi- flies, the antennæ of Ms. are usually

and iron foundries. Fairs are held in Juneand October. Pop. (1911) 13,205. Deity.

Mostaganem, a fortified scaport of Motet, or Motett, a polyphonic vocal Algeria, 45 m. N.E. of Oran It has form connected chiefly with medieval form connected chiefly with mediæval church music. The themo on which a M. was constructed was generally taken from some popular song, the

setting of successive verses in a hymn

or metrical psalm.

Mothe-ie-Vayer, François (1538-1672), a French philosopher, born at Paris. In 1639 ho became a member of the French Academy. He bccame tutor to the Due d'Anjou in 1647, and in 1652 preceptor to Lonis XIV. He was also made historio-grapher of France, and counsellor of state. His complete works on various subjects were published at Dresden in 14 vols. 8vo., 1756-59. Mother Carey's Chicken, see Petrel.

Mother of Pearl, see PEARL

Motherwell, a municipal and police bor. and tn. of N.E. Lanarkshire, Scotland, 1 m. from the Clyde's r. b., and bas coal mines and iron and steel works. It is named from an old weil dedicated to the Virgin. Jubilee Park was presented to com-memorate Queen Victoria's Jubilee.

Motherwell, William (1797-1835), a poet, born and educated in Glasgow. poet, born and caucawa in single.

He held the office of depute sheriffolerk at Paisiey at the early age of
afteen and in 1819 he was appointed
depute of Renfrewshire,
accounting negative.

time contributing poetry It formerly had large to various periodicais. He had also named antiquarian tastes, and a deep knowicego of the early history of Scottish ballad literature, which he turned to account in Minstrelsy, Ancient and Modern (1827), a collection of Scot-tish baliads with an historical introduction. In 1830 he became editor of the Glasgow Courier, and in 1832 he collected and published his poems. He also joined Hogg in editing the works of Burns.

Mugwort

Moths (Heterocera) are the second and larger section of Lepidoptera, and are distinguished broadly from the other section, the butterflies (Rhopalocera), by some variable distinctions which suggest that the division is somewhat artificial, for there is greater diversity of form and structure between some of the groups of Ms. than between them and butterflies. Contrasted with the knobbed or club-shaped antennæ of bntter-

spindle-shaped, thread-like, or comb- by a force equal to that with which The wings are generally held flat when at rest, not vertical. Ms. generally have a connecting hook for fastening the wings together; this is absent in butterflies. Ms. vary greatly in size from a wing expanse of 7 or 8 in. to the almost invisible microlepidoptera. Though many exhibit no special beauty of colouring, others have a wealth of tint that is, perhaps, unique in nature—the colours occurring, as in all Lepidoptera, in the scales on the wings. The females of some species are wingless, as in the Mottled Umber, or are rudimentary, as in the Winter M.—two common Ms. caught on the grease-hands on fruit trees. The silkworm, the caterpillar of Bombyx mori, is the only member of the section of economic memoer of the section of economic value, but on the other hand, great numbers are serious pests of cultivated crops, the damage in all cases being done in the larval stage. Among the most harmful of them are the Goat, Vapourer, Lackey, Cabbage, Winter, and Codlin Ms., and every large is familiar with the mischiorous one is familiar with the mischiovous work of the Clothes M.

Môtiers-Travers, a vil. of Neu-châtel canton, Switzerland, 7 m. from Grandson, in the Val de Travers, which has noted asphalt mines. The Caverne or Grotte des Môtiers is near

by. Pop. 1000.

Motif, see LEIT-MOTIF, and WAGNER. Motihari, a tn. of Bengal, British India, on Lake Motiharl, 75m. N. N. W. of Patna. Pop. 13,000 (Hindus and

Mohammedans).

Motion, Laws of, are three laws on which the whole system of dynamics is based. They were formulated by Nowton in his *Principia*. These laws cannot be formally proved by experi-ment, or in any other way. They are justified by the fact that the theory of astronomy, which is based on dynamics, gives results and predic-tions which agree with the facts which are experimentally observed. Thus it is inconceivable that these lowe which form the basis of dyna-

> bу that s law Tho

acting force, and takes place in the

it draws the cart forward. See Mach's Mechanics; Ward's Naturalism and

Annosticism.

Motive, the desire which precedes and determines a voluntary act. This involves the anticipation of the final realisation, and the consummation is said to be the object or the end of the action, and the action itself is the means of gaining or realising the object of desire. It is easy to show that while the action is the cause of the (actual) pleasure, yet the anticipation of the pleasure is the cause of the action. So M. and end are often used as synonymous terms.

See WILL. Motley, John Lothrop (1814-77), an

historian, born at Dorchester, a suburb of Boston, Massachusetts. He was educated at Harvard, where O. W. Holmes (q.v.), afterwards his biographer, was a fellow student. After graduating he went to Europe, studied at Göttingen and Berlin, and visited Italy. On his return he visited Italy. On his return he studied law, and was admitted to the bar in 1837. Ho did not, however, practise, and was in 1840 sent to St. practise, and was in 1840 sent to St. Petersburg as Secretary of Legation. but returned in 1842. Meanwhile, having published two novels, Morton's Hope: or the Memoirs of a Provincial (New York, 1839), and Merry Mount: a Romance of the Massachusetts Colony (1849), which had little success, ho turned to history, and attracted attention by some essays in various reviews. Having assisted to write an historical work. decided to write an historical work on Holland, he proceeded in 1851 to Europe to collect materials, and in 1856 published The Rise of the Dutch Republic. It was received with the highest approval by such critics as Froude and Prescott, and at once took its place as a standard work; it cory tools its place as a standard work; is on has been translated into Dutch and edic-french. It was followed in 1860 by facts the first two volumes (concluding yed, volumes, 1867) of The United Netherhese lands, from the Death of William the Silent to the Synd of Dort. On the The benking out of the Civil War in will America, M. published (with his will America, M. published (with his uni-initials) in the Times papers on the history of the relations between North and South: these were reprinted in pamphlet form in 1861 with the title Causes of the Civil War second law states that the inte of in America. The same year M. was momentum is proportional to the appointed United States minister at Vienna, and In 1869 at London. Ille direction of action of the force. This latest works were a Life of Barnereld, law gives the method of measuring the Dutch statesman, and A View force both in magnitude and directof... the Thirty Years' War. M. force both in manitude and director. The third Pars' War. M. tion. The third law asserts that to holds a light place among historical every action there is an equal and writers, both on account of his reposite reaction. Thus a horse draw-search and accuracy and his viviling a cart is pulled back by the collar and dramatic style, which shows the

insects and fruit.

Motor Boats. The greater thermal efficiency of the internal combustion engine (see GAS ENGINE), and consequent economy in fuel, together with other advantages, such as occupation of less space, quickness in starting, reduction of staff, etc., has led to attempts to substitute it for the steam engine in many types of boats from 5000 tons gross downwards. Great activity is shown in the French, German, Italian, and Russian navies. Russia owns a small power oil-engined gunboat. The French have experimented with a 2000 h.p. cylinder, Germany a 3-cylinder engine, 6000 h.p., with the idea of fitting a 6-cylinder 12,000 h.p. engine to the sbatt of a battleship. Britain is experimenting with a 2000 h.p. cylinder, and is fitting oil cugines to a twin-screw destroyer, turbine driven at full speed, which may be used for cruising speed. As regards merchant service, ships have been fitted, and are actually in service: France (cargo, 4920 tons

2200 tons, Spoorwoy 4-cycle single-acting S.S. engine, 6-cylinder, 1100 h.p.). The greatest installation under h.p.). The greatest installation under actual construction for one vessel is by Messrs. Krupp: 12 2-stroke cycle cylinders, 22 45 in. diameter, stroke 39 4, in., to develop 3500 h.p. In February 1912, the E. Asiatic Co.'s vessel Sclandia, built by Burmeister and Wain, Copenhagen, visited the Thames and was inspected by our Thames, and was inspected by our naval constructors and the First Lord. The vessel was designed to earry 7400 speed of 12 knots. In trials in the Sound the vessel, being light, attained a speed of 12 knots at 40 revolutions and 2500 indicated h.p. Many other vessels are under coustruction, and on order, and it may be considered that, in the merchant service, commercial success has been service, commercial success has been achieved for oil-engines up to 3000 h.p., particularly when it is romembered that ships of 2000-3000 h.p. are in great demand. Navy submersibles are driven when under water by electricity, but oil-engines are used to generate this, and also for partace propulsion. Torrece heats snrface propulsion. Torpedo boats,

influence of Carlyle. An edition of his engines, while the motor-driven works was published in 9 vols., 1904. hydroplane has attained remarkable Motmot, or Houtou (Momotus), a genus of birds which inhabit dense success.

The motor best has a court to the forests in transfer The motor best has a court to the forests.

Pleasure eraft, etc.—The term motor boat has some to be identified forests in tropical America. The motor boat has come to be identified plumage is brilliant, green and blue predominating; the tail is long. No and sea launches and tenders. Immest is made, the eggs heing laid in mediately on the success of the petrol holes in the trees. The food is mainly small boats of all descriptions as a light, compact, speedy motive power. In fact, the speed thus attainable in small eraft caused the early developmeut to proceed along the line of racing; an extremely useful direction. as it led not only to further designs in boat-building, but showed the necessity for engine designs different from those used for road work. The marine motor is a moro robust engine, slower running and heavier; the propeller cfficiency, except in the case of racing boats, not being obtained at high revolutions.

> Fuel.-For high-speed engines in smaller craft, petrol is chiefly used. In larger vessels paraffin or crude petroleum is employed. Owing to the increasing price of petrol, much attention is being given to substitutes. Paraffin and crude oils require different forms of carburetter for suc-cess. In heavier engines the hot-bulb system is employed, while the Diesel engine, for example, can work at a sufficiently powerful compression as to dispense with a special source of heat.

Engines.—For big ships, heavy oil-engines are used, the Diesel (see GAS ENGINE) having made great headway. The four-stroke engine has the advantage of absence of temperature troubles, better balance of reciprocating parts, and greater completeness of scavenging; it is largely infavour. The two-stroke engine, bowever, weight for weight, develops 1.4 to 1.5 times the power of the four-stroke; with minimised revolutions temperature troubles are largely avoided; reversing gear is simpler. There is not much doubt that finally the two-stroke will be the form of the heavier engines. In racing eraft of small dimensions the

racing crack of small dimensions the four-stroke is chiefly used, but little advantage probably lies either way.

Silencing, etc.— The essential requirements of silence, absence of back pressure, and low temperature, lead to quite difficult problems in the ease of pleasure craft. To lead the exhanst pipe under water creates back pressure and a traderor to flood the sure, and a tendency to flood the cylinders, so that exhaust above water-level is usual. Baffle plate water-jacketed sileneers are used. Another method is to spray water directly on to the exhaust gases as they leave the valves, but this method torpedo-boat tenders, and auxiliary is apt to lead to valve corrosion. The launches have been fitted with oil Langdon silencer is one of the devices

e:

used to avoid such trouble. The water from the cylinder cooling jackets is sprayed into the head of the silencer, and the exhaust gases are brought into this through an intermediate chamber.

Propeller.—Pitch angle is taken at two-thirds the diameter, and an angle of about 43° gives the best efficiency, but a pitch approaching this angle is only realised on slow-speed engines. The usual M. B. has generally a fine-

pitch run at a high speed. Reversing .- There are many propellers of a reversible type; they are provided with mechanism at the root of the blades, whereby the pitch of the blades is reversed, thus avoiding any change in the rotation of the shaft. These are convenient and simple where high speed is not aimed at. Reversing gears are of soveral types: the positive, with a small lay shaft provided with two gear wheels, shifting so as to engage one or the other; the differential gear, in which a block holding gear wheels is shifted forward or backward into clutches by a movement of the shaft; the cpicyclic gear, in which planetary wheels mesh with an internally toothed wheel carried on the engine shaft while fixed to a frame free to rotate or held rigid. These arrangements are necessary, since the internal combustion engine is not reversible with-In the large engines, out trouble. however, where compressed air is used for starting up, the reversing ca: hy its means; in necessitate sm: y hand. sto

ver the surc specd inface of one game. creases. In the case of an ordinary boat, the resistance of the water due to friction, waves, and eddies increases out of proportion, and it is possible so to arrange matters that the power required to lift the boat and thrust it forward is less than that 18 knots, or over, is nanagary. The hour. Dallery in 1786 ran a steam car ricochet 'type has a t of two parallel planes.

a step thus:

Progress is 'by leaps an smooth water is necessities of this form of boat Rev. C. M. Ramus belo the light petrolengine.

being less and less in depth astern; the Pioneer has attained 42 knots on 400 h.p. Dixie IV. (1911) is a compromise between the Thorneycroft and Fauber type. Maple Leaf is the swiftest craft ever floated by man. In addition, we have the boots fitted with planes fixed to vertical stanchions with lifting power from the air, and capable of rising completely out of the water. more suitpletcly out of the water, more suitably designated hydro-aeroplanes. Considering that the first M. B. was exhibited in Paris in 1889, the development has been phenomenal; there was a great impetus about 1902 by the holding of races, and a much groater devolopment since 1905 due to the adoption of special marine types of petrol orgines. Raco meetings are held overy year in the U.S.A., England, Germany, and France. The form of boat suitable for . . who the atten-

Motor Boat Club, and the Blows Yacht Club. See The Motor Boat Manual, Marine Oil Engines Handbook (Dent): Durand, Motor Boats; Douglas, Motor Boats simply explained; also the issues of Engineering for Feb. and March 1912, particularly Feb. 23, p. 260; and The Motor Boat, Feb. 22, 1912.

motor Cars and Motor Cycles. Just as it has always been the aim of man Motor Cars and Motor Cycles. to fly, so he has endeavoured to produce a horseless vehiclo. In the 16th century Johann Hautach produced a vehicle propelled by colled springs; are M. Bs. the Dutch attempted the use of sails. while even steam carriages are re-Ramsay and Wildgoose eorded. patented in England, in 1619, a horseless carriage. Cognot, a Frenchman, is, however, entitled to the credit of undoubtedly constructing a vehicle in 1770 which contained the germs of a yast modern industry. His steam carriage on three wheels carried two roquired to drive it through the water. passengers at 2 m. per hour, a speed To gain this advantage a speed of he afterwards increased to 4 m. per

Miranda IV. was on same plan, but with improvements which conabled her to make 29 knots on rough water, and yet act satisfactorily as an ordinary beat at low flued to lecometives for railroads. Fauber hydroplanes have the curiously mistaken notions as to several planes and steps, the latter

also to curious attempts on the part of Brunton (1813), Gordon, and Gurney to succeed with foot and leg propellers. Gurney, who spent large sums of money in experiment, built a coach in 1826 which ascended Highgate Hill. In 1828 he accomplished the journey from London to Bath, and

and in 1829 carried fifteen pass at 12 m. per hour. In 1831 Dance ran Gurney's steam carriage regularly hetween Cheltenham and Gloucester at 12 m. per hour, his coke consumpat 12 m, per hour, his continned heing 4d. per hour. In four months it ran 3500 m, and carried 3000 passengers. Messrs. Ogle & Summers in 1830 built a car which underwent trials before a select commission of the House of Commons; it worked at 250 lbs. per sq. in. boiler pressure, attained a speed of 35 m. per hour, climhed a hill at 24½ m. per hour, and ran 800 m. without a breakdown. This last is a marvellous result considering the state of the roads, and the fact that it was not hung on springs. The speed was not beaten hy Stophenson's 'Rocket' running on rails in 1829! This select commission reported in extremely favourable terms, and in particular recommended lighter tolls, which were then often twenty times those for horse vehicles. Largely as a consequence of this, many motor vehicles were introduced; Hancock's 'Infant' ran from London to Bristol twice; his 'Autopsy' in 1833 plied regularly hetween Finshury Square and Pentonville. In this he Square and Pentonville. adopted the direct drive hy the crank shaft, hut afterwards the chain drive, using common chains. Other services plied hetween Paddington and the Bank, London and Greenwich, London and Windsor, London and Strat-ford. More ambitious still was Dr. Church's service botween London and Birmingham, 1833. All this remark-Birmingham, 1833. All this remark-nodern motorist, experienced much opposition. Gurney had been stoned by a crowd egged on by irate pos-tillions: each proprietor. tillions; coach proprietor

owners were hostile hut interest of railway compa altogether too strong. In 1832, fifty-later too strong. In 1832, fifty-four bills were introduced into parlia-ment, aiming hy heavy taxation at the new vehicles, one of which, the record length journey from

lahoriously proved that they would In 1836 the famous 'man with the merely revolve under weight), which red flag' was introduced by Act of led to Stephenson's ratchet-rails, led Parliament, and by the end of the also to curious attempts on the part year all steam carriages, except Hancock's London omnibuses, were off the road. The railway interest in parliament is thus responsible not only for our disused canals, but for over fifty years' repression of engineering enterprise. Comment would be out of place here, were it not that but for in 1829 a trip through Reading, such opposition our roads would he Devizes, and Melksham at such a laready perfected for traffic both as pace that the horses of a mail cart to breadth and surface, and a fine were 'hard put to it' to keep up. widely oxtonded network of canals Meanwhilo James in 1823 ha ceeded with the first unbular

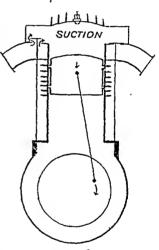
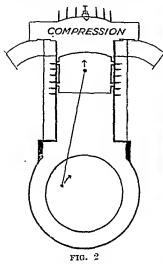


FIG. 1

coach in 1843 running regularly between Deptford and Hastings, negotiating hills 1 in 12 and 1 in 13, performing the return journey in one day. This coach is interesting as being fitted with a differential gear. In 1862 3 when a special

> favourably vehicles. In 1871

shamed parliament into removing the restriction of the 'man with the red Highways Act, ling to this were gas engine by Otto, 1876 (see Gas Engine), and the patenting in 1885 by Daimler of a single-cylinder engine on the same

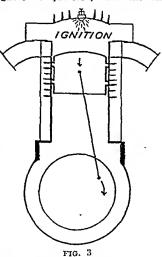


principle. In 1886 he fitted this to a bicycle and was the first to use the Messrs. Panhard and carburetter. Levassor acquired the French and Levassor acquired the French and Belgian rights to use the engine, and constructed a car in 1894. In the meanwhile Benz, in 1885, had produced a motor tricycle, also using a petrol engine. Daimier produced the first double-cylinder V-type engine in 1889, while in 1893-94 Scrpollet succeeded with his steam carriage. Presented the second of the second ceeded with his steam carriage. Press enterprise on the part of Giffard, editor of the Petil Journal, was responsible for the Paris-Roueu race in 1894, won by the De Dion-Bouton steam tractor. The next year saw the Paris-Bordeaux race won by Levassor driving a Daimler motor 735 m. at 14.9 m. per hour. This led to the founding of the Automobile Club of France by the Comte de Dion. In 1895 saw the first motor bicycle which attracted attention, exhibited by Wolfmüller at the Imperial Institute Exhibition. Onward from this, clubs of this stroke and the piston rises, were formed, races arranged, and the driving out the waste and lacrt prosystem of definite trials started. In duets of combustion. The cycle of 1899 the Automobile Club of Great pertains is thus complete, and is Britain held its first trials, and iu-continued over again. The thuing of

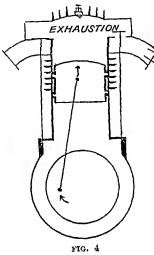
cluded heavy vehicles. In the pre-vious year trials had been held for electric vehicles in France, following on those for heavy vehicles in 1897. Petrol remains the fuel, though the less refined oil, and alse acetylene, naphthalene, ether, and compressed air have been experimented with. Paraffin on account of its cheapness, freedom from danger, and the ease with which it can be obtained, re-quires to be highly heated before it will vaporise, and has not yet succecded in replacing petrol. It has further disadvantages in fouling the cylinder and valves, and in giving off obnoxious gases; the steadily rising price of petrol is, however, leading to determined experiment.

PETROL CARS: Four-stroke engine.

This is on the Otto principle and the oycle of movements known as The first, a downthe Otto cycle. ward strike, performs the operation of suction, drawing in the mixed charge of air and petrol vapour; the succeeding upward stroke compresses these, both inlet and exhaust valves being closed. An accurately timed cleating results that the reserved of electric spark, about the moment of highest compression, fires the ex-



plosive mixture, thus driving the The piston down again. exhaust valve opens just before the completion the valves is automatically performed | stroke. While on the downwardstroke hy tooth wheels and cams, while the contact maker determines the time The spark can be adof the spark. vanced or retarded; the former occurring in front of full compression and giving full power, the latter just after full compression and lowering



the power. The cycle of operations is illustrated in the accompanying four line drawings, Figs. 1 to 4. The averago compression is 85 lbs. per sq. in., hut some reach 95, the charge being compressed to one-fifth or onetenth. Owing to the rapid successive explosions, the temperature of the cylinder rises enormously to ahout twice the melting-point of cast-iron, and the charge would ignite spontaneously bofore full compression were not some cooling devised. For this purposo a water jackot is pro-For vided, and a continuous stream of water pumped through, passing also through a radiator, where it parts with the heat acquired. In this way the cylinder is maintained at a heat of about 185° F.

Two-stroke engine (Fig. 5).—In this the piston itself opens and closes the inlet and oxhaust ports. The crank case is gas tight and the charge is admitted there by a small valve. The

the piston passes E and the products of combustion escape; the port I opens, and the partly compressed chamber, gas enters the to 'scavenge.' The second or npstroke then compresses the charge, which is again fired. It is clear that in this case one stroke out of two, while in the four-stroke engine one out of four is a power stroke. two-stroke has the advantage of simplicity, absence of valves, and less vibration; on the other hand, it is less economical of fuel, there is danger of premature ignition, and troubles from fouling due to lubricating oil in the crank case. It is used largely in America and on motor boats, also on one or two popular motor cycles at present.

Silencer.-The exhaust gases, escaping rapidly at a pressure of 30 to 50 lbs. per sq. in., produce a sories of deafening explosions; to prevent these. pipes as long as possible are fitted with gradually widening ports, hoxes with perforations, with bafflewith perforations, with 'baffle-plates,' etc., the effect of which is to

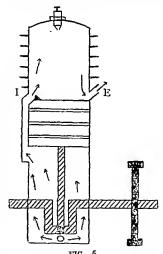


FIG.

expand the gases gradually and steadily into the air. The forms of silencers are innumerable.

Carburetter.—The chief prohlem in applying the gas engine to a motor vehicle is the supply of fuel. This is carried in the liquid state, an lmpriston heing above the exhaust applying the gas engine to a motor valve E (Fig. 5), the gases are compressed and fired, gas being admitted is carried in the liquid state, an lmten the crank case through O, and means advantage, but a means is recompressed partly by the downward

leads the petrol. This tube ends in a fine jet arranged at such a level that the petrol always stands at the end. Below the jet the chamber is open to the air and is funnel-shaped, tapering upwards; the upper part communicates with the cylinder. The suction stroke of the engine draws a current of air round the nozzle, causing a fine spray of petrol to issue, vaporise, and mix with the air, the mixture being drawn into the cylinder. The mixing chamber is surrounded by a jacket containing warm water or exhaust gases, thus maintaining a temperature sufficient to prevent a temperature summer to pro-freezing due to rapid evaporation. It must be understood that the fore-going account merely gives a general idea; there are many carburetters, and all are complicated and delicate pieces of mechanism. Some work on a different principle, but the spray carburetter is in almost universal use. Speelal carburctters are necessary for The proportion of air and gas in the mixture ranging between 18 and 20 to 1 is regulated at the air inlet. It is usually automatically performed by an auxiliary air lulet regulated by of the throttle valve.

Ignition.—The mixed gases being introduced into the cylinder and compressed by the piston, they are ignited by a spark. Compression must be considered as essential to successful ignition and complete combustion, the higher temperature thus induced, as well as the greater pressure, favouring the process. The hot bulb 'system (see Gas Engines) was the early form of ignition, a platinum tube inserted into the cylinder being maintained in an in-candescent state by a flame outside. candescent the control of the contro they are of nickel, nickel occa-

is the function of the carburetter. It methods of sparking; the armature consists of two chambers—the float has both primary and secondary chamber, containing the supply of petrol regulated by a float working a raver; and a mixing chamber, into secondary. A distributor is used for which a tube from the float chamber multicylindor engines. The wiring is multicylindor engines. The wiring is simpler and the reliability greater than that of other systems which are still in use on old cars. The low tension magneto has a single winding, and the current is discharged into an induction coil; the primary current is broken at the required jutervals by a contact breaker. In multicylinder engines separate coils are used for each cylinder, or a single coil and a high tension distributor. The coil and battery system is also still in use. For this a dry cell or an accumulator supplies the current to an induction coil fitted with a trembler. A com-mutator driven by the engine opons or closes the primary circuit. When coils are used without a trembler a make and break device of rapid action is used instead of a commutator. When more than one cylinder has to be sparked, the system may be duplicated; a subdivided commutator is used, or a high tension distributor with a single coil.

Cooling.—A supply of water, the substance of highest specific heat, is carried in n tank and circulates through the water jacket enclosing the cylinder. On its way from the tauk to the cylinder jacket, the water by an auxiliary air inlet regulated by passes through a radiator, a system a spring varying with the suction of of small copper tubes with radiating the engine or the opening and closing flanges of thin metal attached. It is thus exposed to a largo surface of copper which absorbs the heat and passes it on to the flanges which increaso the eooling surface; a current of air passes among them, induced by the speed of the car or by a fan, and thus dissipates the heat. The same The same water is used continuously execut for a small supply to counteract evapora-tion, and circulation is maintained by natural thermo-convection, or by means of a rotary pump. The speed of the engine is varied by advancing or retarding the spark, many drivers using this include alone almost en-tirely; regulation of the throitle by

of the points plathum. The current is provided in which the internal compustion by the magnete, a small dyname engine is at a disadvantage with the generating an intense spark. This steam or electric motor. It is necessing at the compression stakes The current is provided in which the internal combustion works gulte automatically and is sary to give the compression stroke timed by the engine, and seldem re-before knitlen can take place. This gulres attention. The high tension was always done by hand, and is very magneto has superseded all other commonly seen now, but several devices are employed in modern cars. I splashed with oil from the crank Coiled springs, small but momentabig ends. powerful olectric motors, compres y be conair, or acetylene, are used to give of elutch, first drive. For further details construction of the engine, the . and their timing, the piston, ctc by best to consult one of the hooks cited various dovices convey or isolate the

at the end of this article.

rotary movement to or from the chauge-speed gear. When freed it Multicylinder engines. — These change-speed gear. When freed it naturally give increased power, but allows of easy starting of the engine, the smooth-running and flexibility of or changing the gear, and when in the car are ensured by them. With operation merely connects the engine

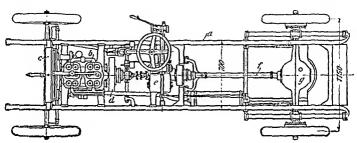


FIG. 6.--PLAN OF 4-CYLINDER PETROL MOTOR, GEAR-DRIVEN

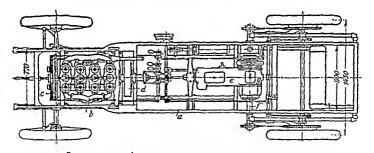


FIG. 7.—PLAN OF 4-CYLINDER PETROL MOTOR, CHAIN-DRIVEN

a, chassis; b, induction pipe; c, radiator; d, clutch e, gear box; f, shaft (Fig. 6), chain shaft (Fig. 7); g, differential gear,

any one cylinder the power varies to the gearing. It is operated by a end of the stroke, and there are two dead points. By arranging the firing of a number of cylinders and connecting them up to the crank shaft regularly round its circumference, the power is distributed more evenly.

Lubrication.—This is naturally of extremo importance. Oll is pumped

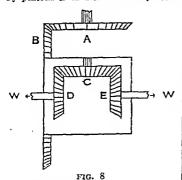
particularly near the beginning and lever on which the driver keeps his foot.

Change-speed gear.—This is simply arrangement, usually sllding, allowing the driving to be off toothed wheels of varying diameter. If the driving toothed wheel is less in diameter than the one connected with it, the speed of rotation is reduced, if into the crank case from a sight feed, greater, increased. Usually the top-but in up-to-dato cars is pumped speed is the direct drive, and for other speeds a change-speed lever operated by the driver brings by a sliding movement, the clutch being 'out,

one or other of the toothed wheels into connection, thus increasing or reducing speed. There are usually four speeds and a reverse. The respects and a reverse, enables the car to be backed, is worked by the into connection, thus increasing or reducing speed. There are usually four speeds and a reverse. The re-verse, which, of course, enables the car to be backed, is worked by the same lever which puts into operation a wheel between the driving and secondary shaft. Another form of gear is the 'epicyelic,' in which the gear wheels are always in mesh, thus obviating the chauce of tearing when engaging, as well as jolting and noises. It is simple in operation and quito easy to understand, but the reader is again referred to the books cited at the end. After passing the changespeed gear the power is transmitted by a propeller shaft fitted with uni-versal joints or flexible couplings to the level gear on the 'live' axle. The propeller shaft is often referred to as e' cardan' shaft. Differential gea

-Thc gear. rotary movement is transmitted to the axle joining the wheels by a level gear, which if simple would drive both wheels at the same speed. This is satisfactory on the straight, but it This is is clear that in turning a corner the car is describing a portion of a circle, and the inner wheel, having a smaller circumference to traverse, must go at less speed than the outer. To allow of this the differential gear is devised; it lessens the stresses on transmission and tyres. It is perhaps the mechanism ono finds most confusion about. The diagram (Fig. 8) may help to make the matter clear, at least, in principle.

In the first case each wheel W is fixed firmly to an indopendent axle turned by pinions D and E. These pinions



are connected by another, C. If now

ing a corner. Now fix these in a bex driven as a whole by the crown bevel pinion B, driven by the driving bevel A. When the car is on the straight, D, C, E are locked, C does not rotate, and the three act as a gircle art. single axle. As the car turns, Crotates slowly, acted upon by the outer wheel, and gives the differential action. Chain drive hardly requires note. is usual to have chains to each of the rear wheels, the differential gear being on the countershaft, at the ends of which the chain sprockets are fixed. Worm-gear drive is extending in use, being very

A worm o shaft engar gear wheel

gear is the simplest form of transmission, and combines clutch, allspeed, and reverso gear in one The driving shaft termechanism. minates in a large steel diso, while the axle carries a wheel rimmed with leather or fibre engaging by friction at right angles with the disc. If dis-engaged it acts as a clutch freed; the axle wheel varies speed as it changes position along the diameter of the dise; at the centre it becomes zero; if crossed over the centre the rotation The petrol engine for is roversed. pleasure and light motor vehicles has pleastre and ight motor venices has shown its great efficiency, but it cannot be said yet to have attained its final or simplest form. Many new designs are continually being tried, great effort being made to attain smooth running, less noise, and fewer parts to need adjustment or repair. The valves especially are open to improvement. Victor years return. to improvement. Piston valve, rotary valve, and siecvo valves are all in use, the last named being specially worthy of note. Two sliding sleaves work between the piston and the cylinder walls. They earry in the upper ends two series of slots of large area, registering together at proper instants; one pair forming inlets, the other exhausts. The engine is smooth and noiseless, is not subject to pro-lention, has high fuel efficiency, while its large area for inlot and exhaust increases fiexibility.

Cycle cars.-The tendency for a long time in the motor industry was in the direction of large and powerful cars with every equipment, and capable of carrying a number of D turns, E will rotate in an opposite passengers. Naturally, prices redirection due to the action of C. If mained high, and had the effect of D and E are rotating at the same increasing hoth the efficiency and speed in the same direction. C will demand of the motor cycle. This has, medied the latter shortcoming, and has become extremely popular, but led to a demand for a simple, in-expensive duo-ear. The Automobile Club and the Auto-Cycle Union appointed a joint committee on the matter, and 1912 saw great activity matter, and 1912 saw great activity on the part of makers of cars. Tho Federation Internationale des Clubs Motor Cycliste, Deo. 1912, defined the cyclo car as follows: Large class: Maximum weight, 784 lb.; max. engine capacity, 1100 co.; minimum tyre, 60 mm. Small class: Min. weight, 330 lb.; max. weight, 660 lb.; min. engine capacity, 750 cc.; min. tyre, 55 mm. All machines to have a clutch and gear. It is yet too carly clutch and gear. It is yet too carly to attempt to describe a standard vehicle, as they vary from a miniature car to a sort of motor cycle converted into a one- or two-seater, three- or four-wheeled vehicle. It is more important to note their special advantages; low weight, simplicity of design, economy of upkeep, ease of handling and storing.

STEAM AUTOMOBILES .- The power is generated in a high pressure tubular boiler by means of petrol fuel. The flash boiler invonted by Serpollet in 1888 is chiefly used on pleasure cars; in this, water is fed at regular intervals into a copper or steel tube raised to a high tempera-ture by a special burner and 'flashed' into steam; it is then passed through mushroom valves into the cylinder. The external generation of power renders its use in the cylinder more subject to control; the engine is much more smooth running and 'flexible,' a great advantage in hill-climbing. A throttlo valve regulates the amount entering the cylinders and obviates the necessity for mechanical change speed gear. No reversing gear is necessary, the engine itself being re-versible. Steam being applied alternately to front and back of piston, the action is perfectly regular, and the two cylinders giving four impulses to cach shaft revolution add to the smoothness. Nofly-wheells necessary, of course, electric ignition m. Vibration and noise are at system. a minimum, the mechanism is simple, and the ear much lighter, giving much less wear on tyrcs. The boiler, howover, is more troublesome to start and maintain, and is more subject to derangement than the petrol motor. Steam cars are more costly

ELECTRICAUTOMOBILES.—Theelce-trie motor eonsists of 'field' mag-

in the matter of fuel.

however, the drawback of less com- rotation within of the armature, fort and sociability. The side-car re- This consists of a steel axle on which thin plates of shect-iron are fixed cdgeways, forming a cylinder. sulated copper wire is laid along grooves and lengthways on the edges of these plates and connected up to the commutator, also mounted on the axle. The commutator is formed of pieces of copper insulated by sheets of mica. Pressing on each side are pieces of carbon, the 'brushes,' which carry the current to the armature. The action of the pole of the magnet is to repel each wire on the armature carrying a current, and the large number of wires gives a rotary movement in which each revolution is caused by a large number of power The motion is thus perimpulses. feetly smooth, with no reciprocating action. Vibration, shock, and noise are practically absent. and car is almost ideal in smoothness of running. The power is transmitted to the driving wheels by reduction to the driving wheels by reduction gear, though in powerful cars direct coupling is possible. When a single motor is used, the gear wheel is mounted on a differential axle, but the use of two motors, one to each wheel, gives differential action, each motor automatically adjusting itself to the reced Speed page he recruited. to the speed. Speed may be regulated by wiring the 'field' magnets in sections, or by passing the battery current through resistances. The controller is a form of switch-board, with the necessary connec-tions. The position of the handle is altered to various speeds; a reverse position changes the direction of the current in the armature, thus re-versing the ear. The switching off the current stops the motor, while the latter is made to act as a brake by short oircuiting it through a resistance, when it acts as a dynamo. Current is supplied from accumulators (q.v.). The battery will run the car at an ordinary speed for some 30 to 35 m.; it must then be recharged This, or interchanged for another. together with the fact that it forms about a third the total weight of the car, renders electric cars unsuitable for any but town work. The cost is about 1d. per m. per ton. What is required is a battery of half the weight, capable of being quickly charged. This has not been yet found: the Edison or Junger battery nickel-iron, is rather more than half weight, is larger, and of less voltage. On the whole it is an improvement, and has come it is an improvement, and has come into considerable use.

Motor Cycles.—These machines are the result of the application of the petrol motor to the eyele, the nets, the limbs of which are wound the petrol motor to the eyele, the with insulated copper wire, while the engine being of the simplest design pole pieces are bored to allow of the and least weight possible. They are

now fitted with magneto ignition, ree engine, and change-speed gear, and can be relied on for touring and ordinary purposes. The tendency has been to give it as many Théry, Richard Brasic. In 1907 a dency has been to give it as many advantages of the motor car as possible. The two- and three-speed gear, and clutch machines are well established; handle or foot starting is common, and abolishes the running start with a heavy machine; it is possible to run slowly or usc free engine in traffic, to start on any hill and climb steadily at a low speed. The valve gear is now mechanically operated instead of automatic. Machines are either belt or chain driven, the former being most popular, though the side-car has popular caused the retention of the chain; a few machines are shaft driven, but this method is restricted to the fourchis method is resolved to not four-cylinder machine. Engines are chiefly single or twin cylinder, the latter being more used with the side-car. The single cylinder retains its popularity largely on account of reliability and simplicity as well as economy, and the two-stroke engine being used successfully. cyclo car appears likely to compete cyclo car appears likely to compete successfully with the more powerful and complicated machines. Motor cycles are: Light weight, from 2 to 2½ h.p., 80 to 140 lb., cost about £35; medium, from 3½ to 5 h.p., about 160 lb., cost about £50; heavy weight, from 6 to 8 h.p., 2 and 4 cylinder, ahout 220 lb., cost ahout £60, but £5 to £15 extra must be added for obsure-speed gear and free energing change-speed gear and free engine clutch. One may mention here, also, the small motor attachment some-times fitted to the rear wheel of the ordinary bicycle.

oxhibition of motor cars was held in i ... England at Tunbridge Wells in 1895, being organised by Sir David Salomons. In 1896, an Act of Parllament made it possible to introduce the veblcles for all uses on roads, and cars came rapidly into use. The Automobile Club of Great Britain and Ireland came into existence in 1897, and held its first trials in 1899, and has made these an annual event. In addition affiliated clubs have sprung addition affiliated clubs have sprung being unsurance. The crack is pearup, and carry on a similar activity shaped and 100 ft. wide; circult, locally. These trials have been of the inner edge, 2 m. 1263 yds.; centre greatest use to manufacturers and purchasers, and account largely for finishing straight, 991 yds. Length of level purchasers, and account largely for finishing straight, 991 yds., sharpest the rapid rise to cilicioney. The curve radius, 1000 ft. The course is automobile Club de France, founded banked from careful selentific designs in 1896, with its headquarters in Paris, by Colonel H. C. L. Holden, who is the chief controlling force in inter-

race was run from Pckin to Paris, completely across the Old World; the route crossed the Gohi Desert, the route crossed the Gohi Desert. Siberia, Russia, and Germany. Starting on Juno 10, Princo Borghese arrived first in Parls on Aug. 10; 40 h.p. Itala car. In 1908 a 'round the world' race was won by a Protos car, followed by a Thomas car; the route was New York to San Francisco, ship to China, Pekin to Parls. The Grand Prix supersoded the Gordon Cup Race in France owing to dispute: Cup Race in France owing to dispute: 1906, Szisz (France), Renault, 63 m. per hour; 1907, Nazarro (Italy), Fiat. per hour; 1907, Nazarro (Italy), Fiat, 70 m. per bour; 1908, Laughtenschlager (Germany), Mcrocdes, 62 m. per hour; 1913, Boillot (France), Peugeot, 72·2 m. per hour. Amongst other important events are the Ardennes Circuit, Targa Florio (Italy), Kaiscrpreis and the Herkomer International Trophy (Germany), Vanderbilt Cup (America), the Alpine Tour (Switzerland). The motor car has already praced its motor car has already proved its service in war, and a motor volunteer corps was established in 1903. Motor corps was established in 1903. Alotor fire engines are increasing; the taxical is gradually monopolising the towns, and is constantly used for country journeys; the motor bus competes with the 'tubes' and suburban railways; while specially designed motor cars convertible into siedges with suitable driving wheels have lives the distinct or the convertible or lower. have been tried in antaretle exploration, though with slight success. Many largo firms and stores in the large towns have been able to extend Modern Automobilism.—Thefirst their business well beyond the suburbs

events taking place on continuous roads, the roads of the British Isles solution of the british asics being unsuitable. The track is pear-shaped and 100 ft. wide; circuit, inner edge. 2 m. 1263 yds.; centre line, 2 m. 1350 yds. Length of tevel finishing straight, 991 yds., sharpest curve radius, 1000 ft. The course is banked from earthy selection designs. by Colonel H. C. L. Holden, who is also responsible for the system of electric timing, which is automatic. The maximum height of bank is 28 ft. is the chief controlling force in inter-national events and racing. The Gordon-Bennett Cup Race became an annual ovent, won in 1900 by M. S in. The track is of concrete, 6 in. Charron. Panhard car. 38'5 m. per deep. There is also at test hill, with an honr; 1901, M. Girardot, Panhard, average gradlent of nearly 1 in 5;

maximum, I in 4. In every respect the Brooklands Automobile Racing Club has arranged for convenience of members and the safety of the public. There are pavilion, paddock, refreshment rooms, garages, lawn tennis so one of their official aviation olub. The portion enclosed by the

Records.—Half-mile (flying start), V. Hémery, 1909, 14:076 sec.; speed, 127:877 m. per hour, the highest speed ever attained by an automobile. Half-mile (standing start), V. Hémery, 1909, 25:566 sec.; speed, 70:406 m. per hour.

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Kilometre (f.s.)
                       V. Hémery
                                                            125.947 m. per honr.
                                          17.76
                                                  sec.
                                          31·326
31·055
             (8.8.)
                                                              71.409
                                                                        ٠.
                             . .
Mile
             (f.s.)
                                                            115.923
                                                     ..
                             ,,
                                                                        ,,
                                          41.268
                                                              87.233
             (s.s.)
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The above were performed on Nov. 8; Benz. 4 cyl. car.

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hr. min. sec.
                   P. Lambert
                                          29
                                               2.5
                                                       1913, Talbot 4 cyl.
  50 m. (s.s.)
                                       0
 100
                                          56
                                              29.93
                   Mons. Goux
                                       0
                                                      1913. Peugcot.
      ,,
                                              52.06 \ 1912, Loraine-Dietrich 4 cyl.
 150
                    V. Hémery
                                       1
                                          31
      ,,
           ••
                                              58.73
 200
      ••
                   C. M. Smith
 300
                                       3
                                          30
                                              17.54
                                                      ·1909, Thames 6 cyl.
         (f.s.)
      ••
                                              23.87
                    V. Hemery
                                              23.87
 400
                                          34
         (s.s.)
      ,,
                                                      1912, Loraine-Dietrich 4 cyl.
 500
                                          48
      ,,
               L. Coatalen and )
T. H. Richards
                                       7
600
                                          57
                                             59.55
 700
                                       9
                                          16
                                              34.02
                                          34 29.88
 800
                                      10
                                                     1911. Sunbeam 6 cyl.
                  Resta and
 900
                                      11
                                          52
                                               3.2
             R.F. L. Crossman
                                      13
                                           8
                                              25.1
1000
          ٠.
                                          m.
                                               yds.
  1 hr.
                    P. Lambert
V. Hémery
                                          103
                                               1470
                                                       1913, Talbot 4 cyl.
         (8.8.)
                                          189
                                               1747
          ..
                                          \tilde{2}\tilde{8}\tilde{4}
                                               817
1344
  3
     ..
          ,,
  4
                                          344
                                                      1912, Loraine-Dietrich 4 cyl.
                           ,,
          ٠.
                                          422
                                               1574
  5
     ,,
                           ,,
  6
                                         518
                                                312
     ••
               D. Resta and
 12
                                         910 1738
                                                      1912, Sunbeam 4 cyl.
          **
              R. F. L. Crossman
                    S. F. Edge
                                        1581 1310
                                                       1707, Talbot 6 cvl.
 24
```

The above were all performed at Brooklands.

In addition:-

			min.	sec.				
1	m.	(f.s.)	0	28!	Marriott at	Ormond	Beach,	1906.
-	••	(s.s.)	Ō	37%	Macdonald	٠,,	,,	,,
2 5	,,	(f.s.)	0	583	Demogeol	,,	,,	47
5	,,	(s.s.)	2	471	Marriott	,,	**	"
10	,,	,,	. 6	15	Macdonald	,,	23	,,
15	"	23	10	U	Lancia	,,	**	97

These are not officially recognised by the Int. Fed. of Aut. Clubs.

Motor cucle: British records-

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hr. min. sec.
                                                    m. per hour
                                                               1911, Matchless Jap
                                         0 24.52
                                                      91.23
Kilometre (f.s.) C. R. Collier
                                      0
                                            39.4
                                                      91.37
Mile
                                      0
                                         0
                                                                          Indian
100 m.
                  A. J. Moorhouse
C. B. Franklin
                                        40
                                      1
                                                                1912
                                        36
350 "
```

Cycle car.—The highest speed, 59.63 m. per hour, was attained by H. S. F. Morgan, Morgan cycle car.

Grand Prix, 1913, won by Bourbeau (Bedella), 38.9 m. per honr, but MoMinnies (Morgan 3 wheeled) came in first, 39.4 m. per hour.

Motor Law.—The Motor Car Act of a tn. of Granada prov., Spain. 1 m. 1903 enforced registration of cars, from the Mediterranean. It was the licensing of drivers, regulates light-lancient port of Granada. Sllk. sugar, ing, and penalises those who drive to the common danger. It imposes a speed limit on roads of 20 m. per hour, and gives power to the Local Government Board on application by local authorities to reduce epeed limit, or prohibit motor cars on any roads they consider desirable. A royal in 1905 recom-

the 20 m. per hour speed mine except for towns and villages where the maximum suggested was 12 m. per hour, thus leaving speeds above 20 on country roads subject only to police estimation of 'common danger'; higher scale of taxation, the revenue to go to up-keep of roads; emission of smoke or vapour in offensive quantities; excessive vibration and noise to be punishable. The Finance Act, 1910, raises the licence duties, according to power, from the previous 2 guineas on less than 2 tons, to prices ranging from 2 to 40 guineas; and imposed a tax of 3d. per gallon on petrol. Motor cycles are taxed at £1 uniformly. Medical men pay half duties, and 1½d. per gallon petrol. Exemption from taxes is allowed on cars specially made and solely used for the conveyance of goods.

Molor signs.—For 10 m. per hour or lower limit, a round white ring, speed in figures underneath. Prohibition, red solid disc. Caution, dangerous corners, cross roads, steep gradients, hollow red equilateral tri-angle. All other notices to be on

diamond-shaped boards.

See W. Flotcher, History and Development of Steam Locomotion on Common Roads, 1891; L. Lockert, Petroleum Motor Cars, 1898: W. W. Beaumont, Motor Vehicles and Motors, 1890 by Miscow Motors, 1890 by Motors, 1890 by Miscow Motors, 1890 by Motors, 1 See W. Flotcher, History and Development of Steam Locomotion on Common Roads, 1891; L. Lockett, Petroleum Motor Cars, 1898: W. W. Beaumont, Motor Vehicles and Motors, panies a crest, badge, or cont-of-1900-5; G. D. Hiscox, Horseless and Motors, arms, called also in Scotland the Vehicles, 1900; Sir H. Thompson, The ditton. In France and Scotland the Motor Car; R. Jenkins, Motor Cars was frequently placed in a scroll of the common statement of the common state

from the Mediterranean. It was the ancient port of Granada. Slik, sugar, wine, and fruits are produced; lead and antimony are mined. Zine and copper are also found, and there are iron foundries. Moorish ruins remain. Pop. (com.) 20,000.

Mott, John R. (b. 1865), a social and missionary worker, born in New York. In 1888 he became student secretary of t mittee of the

Associations.

chairman of th of the Student Volunteer Movement. He was made general secretary of the World's Student Christian Federa-tion in 1895, and in 1898 foreign secretary of the International Com-mittee of the Young Men's Christian Associations. He is chairman of the Continuation Committee of World Missionary Conference of Beta Kappa. dinburgh and

of numerous

books and articles on missions, etc. Motte, Antoine Houdart de la (1672-1731), a French poet, born in Paris; made an academician in 1710. Among

made an academician in 1719, Among his works were Ince de Castro, a successful play; a translation of the Iliad (1714), and Fables (1719).

Motteux, Peter Anthony (Piorre Antoine) (1660-1718), a French litterateur, settled in London as a French Huguenot merchant on the revocation of the Ediet of Nantes (1688). He wroto dramas, including The Amorous Miser and Novelly. Marnelshed Don Ouisale into Enrilsh. translated Don Quixote into English, and Rabelais' works with Urquhart and Ozell. Scc Cibber, Lives of the

Latin iges in found. prov.,). Pap.

Law; Badminton Library, Motors and (com.) 9000. Motor Driving, 1904; W. Fletcher. Motul, a

tenance of Motor Cars; H. W. Starson, which in the presence of damp attack Car Troubles, 1913; Lord The Car, 1913; The Aute

of the A. C. of Great. he blue, green, or brown Ireland; The Molor Vean holor fruit, can ages and other fruit, can molor Manual; Molor Cycle Manual; only gain a hold when the skin or cycle Car Manual.

Motril (ancient Firmium Julium), damaged.

Motul, a vil. of Yucatan state, Mexico, 30 m. E. N.E. of Mérida. Pop. (com.) 18,000.

Mould, a general unscientific namo for a varlety of thread-like fungi,

Penicillium glaucum and

Mouldings, in architecture, any assemblage of narrow surfaces projecting from the face of a wall or other surface and advancing one heled by

tal or ation. plane

or eurved, and if the latter, coneave or convex, or elso compounded of hoth forms; and again are either plano or curv

by different n

profiles, their Thus the fillet, tænia, band, are all plane or flat mouldings. The corona is also a merc plane band, except that it is occasionally enriched in Roman architecture. Lesser convex M. are termed beads, but the longer M. of tho same kind in the hases of columns are termed tori or torusses. The cyma recta, or comatium, is a compound M., coneave above and convex below: while the cyma reversa is couvex above and concavo below. The cavetto is a mero hollow or sweep in-tervening between and serving to connect two M., one of which projects beyond the other. The ovolo is a alled bo-

nto ova. of eggs. M. may

be carved or cnriched, except the cavetto and fillet; the pattern heing accommodated to the surface of the M. The cuma recta, or talon, as it is sometimes called, is cut with a peculiar kind of tongued or arrow-headed ornament. In regard to Greeian M., it remains to be observed that many of those which are uncarved were painted with some ornamental pat-tern, and not unfrequently in the most brilliant colours.

Moule, Le, a tn. in the French colony of Guadeloupe, W. Indies, with a port on the N.E. coast of Grandc-Terra. Sugar, coffee, rum, and log-wood are exported. Pop. (com.)

11,000.

Moulins (ar Allier dept., which has an

at this point.

eathedral eathedral (founded 15th century, completed 19th century). M. forms a suffragan bishopric of Sens. Manufs. includo textiles. hats, cabinets, and machinery. Pop. (com.) 22,000.

Moulting, a general term for the habit in a large variety of animal types of shedding, periodically, the outer covering—feathers, hair, skin, cuticle, etc. In common usage it refers to the annual renewal of birds' teathers, which usually follows the commetten or parental duties. the completion of parental duties.

Moulton, Mrs. (née Ellen Louise Chandler) (1835-1908), an American Chandler) (1835-1908), an American novelist and poet, married to W. Moulton, a Boston publisher (1855). She was for long Boston correspondent on literary topics for the New York Tribune. Her works include: This, That, and the Other, 1854; Juno Clifford, 1855; Bed-time Stories, 1873; Firelight Stories, 1883; Some Women's Hearts. 1874; Swallow-Flights., 1875; In the Garden of Dreams, 1890. She edited P. B. Marston's Garden Secrets with biography (1887) and Secrets with biography (1887) and Collected Poems (1892). See Whiting's

Life, 1910.
Moulton of Bank, John Fletcher Moulton, Lord (b. 1844), born at Madeley, Salop. He graduated as senior wrangler and Smith's prizeman in 1868 at Cambridge. Called to the bar in 1874, he established the leading practice in patent law, on which he was recognised as a supreme authority. He took silk in 1885. He sat as a Liberal memher of parliament for Clapham, 1885-86; S. Hackney, 1894-95; Launceston, 1894-1906, when he became a Lord Justice of Appeal. In 1912 he hecame one of the Lords of Appeal in Ordinary or Law Lords and received a life peerage. Life, 1910.

a life peerage. Moultrie, John (1799-1874), an English poet, born in London. He entered the Church and was rector at Rughy from 1825 to his death, during the time Thomas Arnold was head-master. In 1864 he became canon of master. In 1864 he became cannot of worester. His collected works were published, in 2 vols., in 1876. His hest poems were: My Brother's Grave (1820) and Godiva (1820), and he also wrote: The Dream of Life, 1843; The Black Fence, 1850; St. Mary, 1850; Allars, Hearths, and Graves, 1854.

Mound Birds, or Mound Builders (Magnades) a remarkable family of

(Megapodes), a remarkable family of gallinaceous birds, which are so called on account of their habit of throwing up large mounds of vegetable matter in which they deposit their eggs, and after covering them up leave them to be incubated by the heat produced by fermentation. In some cases the mounds are co-operative. The castle of the Bourhon dukes, and a species number only about twenty, and are characterised by very large fect. short tail, and erested head. familiar example is the hrush turkey

Mound Builders, the prehistoric in-habitants of N. America, who lived mainly in the valleys of the Mississippi and Ohio. There are various opinions about their identity, but the generally accepted view now is that the Indians are their descendants, and that they helong to the Stone Age. They appear to have surpassed the Indians (when first met by the

in shape, being round, conical, or in the shape of animals, and are scattered all over the country between the Alleghany and Rocky Mts., but chiefly in Ohio, Illinois, Indiana, and Missouri. The most famous mound in Ohio is the Great famous mound in Ohio is the Great Serpent in Adams co., near Bush Creek. This, a gigantie serpent made in earth, measures 1348 ft. in length and is 5 ft. high. Wisconsin, too, contains some mounds in the shape of animals, some of which are of gigantie size. These, Repeally known as effigy mounds, were known as effigy mounds, were rally bably objects of worship as guardings of the villages. In Tennessee other kinds of mound found contain of or more graves, varying in size, made of slabs of stone set on edge. of slabs of stone set on edge.

Mound Dwellings, underground or somi-underground dwellings, which were at one time very widespread. The carliest M. D. was discovered about 1724, near Lucan, co. Dublin, Ireland, and in Scotland there are were at one time very widespread. The carliest M. D. was discovered about 1724, near Lucan, co. Dublin, Ireland, and in Scotland there are many varieties, numerous instances being found on the coasts of all the Orkney Is. On the shores of N.E. Siberia, tho borean race of the Onkilon dwelt in earth huts, half sunk in the form of small with a thick layer of these were those us.

natives of Kamchatka and the Aleu-the ascentof gi have sot a fashion in tian Is., and the winter dwellings of the Greenland Eskimos were practi-cally identical. M. D. were usually circular or oblong in shape, and had the appearance of a large rounded hillock, and were entered by a low, narrow passage.

whites) in civilisation, and made tree of the order Rosacce, with pinvery beautiful objects of stone, shell, nate leaves and large corymbose bone, and beaten metals. But the cymes of small cream flowers, which most wonderful works of their hands are followed by small ficshy scarlet were the earth mounds from which berries with yellow flesh, which have they receive their name. These vary a bitter acid flavour, and are much in shape, being round, conical, or in eaten by birds. They have been dried and ground into a kind of flour. The tree attains a height of from 10 to 30 ft. Its tough wood has numerous

> Mountaineering. The awo and inspiration associated with mountains is well illustrated in the O.T. and in the Greek classics; it amounted to fcar and avoidance. We hear of Trajan viewing the sun-risc from Ætna, we have the ruins of temples and churches on hills, Poter III. of Canigou in Aragon climbed the Pyrenees, Petrarch found moral in-spiration on Mt. Ventoux near Avignon, Bonifacio de' Rotari climbed the Roccia Melone (11,600 ft.) in 1358 on mpious mission, Leonardo da Vinci saide scientific observations on a recoviled at Val Sesia, but the first real idea ascent of a mountain in the real ded ascent of a mountain, in the

and from date the

Buet was De Luc.
Velan (12,000 kinnen timbed the
Velan (12,000 kinnen timbed the
Blanc is said tct.) in 1779. Mont
by a party of n have been ascended
true conquest lives in 1775, but its
Luct De Sassy pipears to have been narrow passage.

Meundsville, co. seat of Marshal co., W. Virginia, U.S.A., on the Obio at the mouth of Grave Creek, 12 m. S.W. of Wheeling. Manufs include glass, bricks, enamel ware, whips, and clgars. Pop. (1910) 8918.

Mountain, a tn. of Dundas co., Ontario, Canada, 30 m. S.S.E. of Ottawa. Pop. about 3000.

Mountain, The (Fr. La Monlagne), the name given to the extreme Revolution.

Mountain, The (Fr. La Monlagne), the name given to the extreme Revolutionary party, led by Danton and Robesplerre, in the legislatures of the first French Revolution.

Mountain Ash, a tn. of Glamorganshire, Wales, 4 m. S.E. of Aberdare. This included in the parl, bor, of Merthyr-Tydvil. There are from foundries, water and gas works, and foundries foundries foundries foundries foundries foundries

the Wetterhorn, may he said to have set the fashion in M. as a sport. Mt. Rosa was climbed in 1855, after many unsuccessful attempts of previous years. The English Alpine Club was inaugurated in 1857, and published two years later, under the editorship of Mr. Ball, Peaks, Passes, and Glaciers, a second scries following later. These publications gave accounts of the climbing and exploration of members of the club, and led tion of members of the club, and led to the first number of the Alpine Journal in 1863. Among the members who have published books are Mr. Hinchcliff, Mr. Whymper, Prof. Tyndall, Sir Leslie Stephen, and Mr. Justice Wills. The French Alpine Club was formed in 1874, and was followed by others. At the present time the membership of the clubs may be estimated as follows: English, 700; French, 5500; Italian, 6500; Swiss, 9700; German and Austrian Alpino Cluh, 78,500. The famous disaster of the Matterhorn Austrian Alpino Cluh, 78,500. The famous disaster of the Matterhorn occurred in 1865; Mr. Whymper was one of the party. The Alps were the home of M., and all the great guides have been natives of that region. Among them many have become justly famous: Auguste Balmat, the brothers Jean Baptiste Croz, Michael Croz (lost on the Matterhorn), Francois Dévoussoud, Melchier Bannholzer, Melchier Anderegg, Peter Bauzer, Melchior Andercgg, Peter Bau-mann, Christian Almer, and Ulrich Lauencr. The Alps have not claimed the sole attention of climbers. Douglas Freshfield visited the Cau-Gasts in 1868, and most of the great 1898; Gilbert and Churchil peaks had heen elimbed by 1888. In N. America, the Rev. W. S. Green gerald, New Zealand Alps; Visited the Selkirks in 1888; S. Abraht America, Mr. Whymper the Andes in 1907; 1879-80, when he ascended Chimborazo and explored the mountains of Equador. In 1883 Dr. Gussfeldt the Alp ascended Maino and attempted Acon. Mount ascended Maipo and attempted Acon- Mounte cagna in the Cordilleras between ing in the Cordilleras between Chili and Argentina. The summit of Aconcagna was reached by the Fitzgerald expedition in 1897. Sir W. Martin Conway climbed Illimani in the Bolivian Andes in 1898 and ingring. Bolivian Andes in 1898, and carried ont explorations in Tierra del Mountaineering Club. Fuego. New Zealand.—The Rev. Mountain Limeston

1813; many other peaks were as- W. S. Green worked in the Alps in cended, including the Galenstock 1882, and the New Zealand Alpine and Wetterhorn. The activity extended from Mont Blanc through the building the Galenstock 1882, and the New Zealand Alpine and Wetterhorn. The activity extended from Mont Blanc through the building which have carried on the work. Mr. Alps of Bern and Uri to the Tyrol, where Thurwieser and Ruthner were at work. J. D. Forbes (whose book, and Herr Purtscholler, 1889; Kenia, Travels through the Alps of Savoy, appeared in 1843), Sir John Herschel, Lord Minto, and John Ball (the first Conway explored in 1842). Whattin the Alpine Club), were particularly the Englishmen who were 23,000 ft. In 1895 Mr. A. F. Mumattracted by the Alps. But Mr. Wills (now Justice), who in 1854 climbed the Wetterhorn, may he said to have an expedition to the snowy regions of and Herr Purtscholler, 1889; Reme, Mr. Mackinder, 1899; Ruwenzori, Morris, 1900. Asia.—Sir W. Martin Conway explored in 1892 the Karakorum Mts., and ascended a peak of 23,000 ft. In 1895 Mr. A. F. Mummery lost his life in attempting Nauga Partat. Mr. Freshfield headed an expedition to the snowy regions of Sikkim in 1899. A great deal of exploration has been carried out by Gurkha Sepoys trained by Major the Hon. C. G. Bruce. Arctic and Antarctic.--Exploration in these regions partakes largely of one branch of M. Tho crossing of Greenland by Nansen and others, and the work of Peary in the same region, may be mentioned. In 1896 and 1897 Sir W. Martin Conway explored the mountains of Spitz. hergen. Mt. Erehus, in Antarctica, was climbed by Dr. Mawson's party during Shackleton's expedition towards the South Pole. Climbing in the mountains is very varied, but glacier work and rock climbing are the fascinating hranches. It is generally a very expensive matter newadays. Guides are organised (those of Chamounix in 1821 or 1823); in many parts of the Alps it is not permitted without guides. Rock climbing has hecomo a famous sport in the mountains of the British Isles, and particularly in N. Wales and Cumberland, and on the Black Coolin in Skye. See Conway, Climbing in the Himalayas, 1847; Gottlieh Studer. Ueber Eis und Schnee, 1896-99; Whymper, Serambles among the Alps in the Years 1860 to 1869, and Great Andes of the Equator, 1892; Fresh-field, Italian Alps, 1875, and Ex-ploration of the Caucasus, 1902; Coolidge, Swiss Travel and Swiss nloration Coolidge, Swiss Travel and Swiss Guide Books; Spender and Smith, Through the High Pyrenees; C. E. Mathew, The Annals of Mont Blanc, 1898; Gilbert and Churchill, The Mountains, 1864; Fitz-

> ing in Sage, Mountain Limestone, the compact

boniferous series which occurs in the mountain area of the Pennines. It is from 2000 to 4000 ft. thick, and is

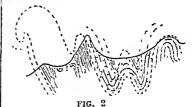
crowded with corals and encrinites. Mountains. The M. of the world occur chiefly in great systems forming chains or ranges of more or less parallel series, wideaing, narrowing, and forming nodes and radiations. There is sufficient appearance of scheme in these systems to lure geographers to formulate theories accounting for their arrangement. They border the cdges of continents and appear to risc from deep ocean; the ranges are often continued out to sea and through the occan as a series of islands suggesting subsidence of part of the system, e.g. the Aluvian Is., the E. Indies, and Pacific Is. to Now Zealand, which are again continued in the recently discovered ranges across Antarctica to connect with the Andes of S. America. The depths of the Pacific Ocean are thus bordered by a complete encircling M. system. Again, the Eurasian system from the Pyrenees across to the Pamirs follow the Mediterranean, Black Sen, and Persian Gulf coast llaes. Such a scheme may be followed out in detail amongst all the M. of the world, and it is impossible to exclude from any theory the conformation of the crust below the waters. The evidence of geological structure of the M. goes far to explain the scheme, and it is con-sidered that the great M. systems are due to the shrinkage of the carth's surface consequent on coellag, a subsidence being accompanied by an ele-vation, parallel and more or less commensurate. Such a theory has led to somewhat of a mathematical investigation. A cooling body would shrink to smallest volume, and the smallest volume for a given surface is found in the tetrahedron (q.v.); the earth in coeling would, in fact, tend to the tetrahedral form, though other considerations such as its rotation would act against this. It is nevertheless true that if a volume of water, sufficient to cover five-sevenths of tho surface, could be held by gravity in a tetrahedroa, the arrangement would be quite similar to that on the earth, be quite similar to that on the earth, the edges forming M. systems and coatinents, the faces the ocean. This theory was promulgated by Lothian Green. It would seem, however, to imply, though net necessarily, two consequences: the permanence of the great M. ridges and that of the deep oceans. It cannot be said that either sectablished; there is a good deal of coatinents, the faces the ocean. This theory was promulgated by Lothlan Thero are, however, name types of Green. It would seem, however, to imply, though not necessarily, two consequences: the permanence of too strata; they may be classed as Block great M. ridges and that of the deep oceans. It cannot be said that either oceans. It cannot be said that either formation. The former shows a rift sestablished; there is a good deal of valloy edged by mountainous sides, evidence for the former but considerable evidence against the latter. The latter, a raised block due to bilateral subsidence. When dissected lifted in Tertiary times, at any rato to by weather and streams an irregular

bluish limestone of the Lower Car-their present altitude, but this may have been only an additional thrust. On the other hand, the M. of Scaudinavia, W. Scotland, and Ircland, and also the Appalachlan system, are much older and were probably oace much higher. As regards the forma-tion of M., it is possible to classify in part. The surface of the earth is subjeot everywhere to denudation (q.v.), and the elevated regions specially so.

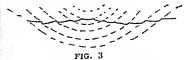


FIG. 1

Yet there are M. which owe their existence to the denudation alone of elevated folds in the earth's crust. Such Folded M. are illustrated in Fig. 1. The diagram also shows clearly the relation of Foot-hills to their axial range. Fig. 2 shows a mere complicated system, well showing the enormous contortionary force, the



steep angles of M. strata, which often give riso to fantastic scenery and the Impression of catastrophic forces. A special type of denudation M. Is often classed as Relict or Residual M. (Flg. 3). In this case denudation has been prelonged, and it is quite common to find the synclines forming the ridges.



M. mass results; if the blook is tilted, sinian and Central African groups a range of M. results. An intrusion of that it can traverse the desert; the volcanic rock may have the effect of elevating the strata into a dome-like shape, which gives rise on denudation to a group of M.; to these the name Domed M. has been applied. In all cases separate M. owe their form to denudation. The central 'core' when highly inclined gives rise to the peaks, aiguilles, and horns. The Rockies, Andes, Pyrenees, Alps, Himalayas, and the other portions of the great connected systems of the world are young folded M.; the Scandinavian M., Scottish M., Urals, Australian M., are examples of old, residual, or reliet folded M.; the Vosges and Black Forest M., the M. enclosing Bohemia, and more of these in Cartal Maria and many of those in Central Africa, are block M. M. have largely served to isolate or separate communities and thus determined nationality and

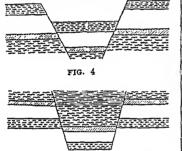


FIG. 5 The Latin and Teutonic races have been thus largely separated, while Switzerland Abyssinia owe

mainly to the na tries; the Andes marked example

Great range of climate is shown in elevated ranges, which gives a characteristic zonal distribution of vegetation arranged according to elevation, and, as in Uganda, Brazil, Peru, and Mexico, renders possible an energetic and progressive population in lati-tudes where lowlands are enervating. On the other hand, in Tibet, the climate forbids progress. In Norway and ancient Phoenicia, Greece, Spain, and Portugal M. have largely forced maritime enterprise. They, further, are a great factor in local climate, as in the Mediterranean, the Ganges valley, and New Zealand. Egypt is a remarkable case of estab-

Indus is a similar river. The Föhn, Chinook, and North-Westers of New Zealand (q.v.) are examples of beneficial winds due in part to M. The form of dissection of M. masses is often of great importance, particularly in the matter of transverse valleys, cols, saddles, and necks. Many instances occur in the Alps of Switzerland. In England the gaps in between M., e.g. the Cheshire plain; saddles such as Shap Fell and the transverse valley of the Aire, have had great influence on communication, both military and commercial (see RIVERS and VALLEYS). The great The great M. systems are further the regions of most frequent earthquakes (see Earthquakes). They are, further. often associated with the distribution of volcanoes. These are M., but except in height in no way to be classed with them, being merely accumulations of material thrown out from vents along the lines of faulting. Where fold M. are young, and clevation, subsidence, and faulting are not quiescent or comand fathing are not duescent complete, earthquakes are likely to be experienced, and if in regions near deep water, e.g. Mediterranean and Pacifio, the intrusion of the water along faults and crscks gives rise to volcanio activity (see VOLCANCES). As it is largely in mountsinous regions where the lower strata arc exposed or near the surface, they become the centres of the mining of valuable, because somewhat rare, metals, e.g. the Rockies and Andes, the Australian and New Zealand Alps. See E. Suess, The Face of the Earth (trans. Oxford). 1904, 1906; A. Penek, Morphologie des Erdoberfläche, 1894; G. de la Noë and E. de Margerie, Les Formes du Terrain, 1888; W. M. Davis, Physical J. Geikie, Earth E. Marr, Scientific

W. L. Green, Vestiges of the Mollen Globe (vol. i.), 1875, (vol. ii.) 1887; Dr. T. Arldt, Die Entwicklung der Kont, und ihr, Lebewelt, 1907; Millard Rende, Origin of Mountain Parts Kont. und un. Lebewett, 1907; Millard Reade, Origin of Mountain Ranges, 1886; O. Fisher, Physics of the Earth's Crust, 1889; J. W. Gregory, The Making of the Earth. See also Rivers, Valleys, Glaciers, etc., and Geology and its bibliography. Mountain Wine, a sweet, luseious variety of the white Spanish wine of Walsers made from white grapes

1900; Lord Ave-Switzerland, 1896;

white grapes Malaga, made from picked when quite ripe.

Mount Barker: 1. A tn. of Hind-marsh co., S. Australia, 18 m. S.E. of Adelaide, at the foot of Mt. Barker. lished civilisation dependent on M., Much fruit is grown, and there are for the Nile is fed so well from Abys-tanneries. Pop. 2000. 2. A postal

shops, and manufs. of bricks, furniture, and paper. Pop. (1910) 6935. 2. A bor. of Northumberland co., Pennsylvania, U.S.A., 6 m. from Shamokin. Coal is mined, and mining machinery and miners' supplies are manufactured. Pop. (1910) 17,532.

Mount Clemens, a health resort, cap of Macomb co., Michigan, U.S.A., on Clinton R., 20 m. N.N.E. of Detroit. There are noted mineral springs. Beet-sugar, lumber, wagons, sleights, and cigars are manufactured.

Pop. (1910) 7710.

Mount Descrt, an island of Han-cock co., Mainc, U.S.A., in the Atlantic, W. of Frenchman's Bay. The surface is mountainous; highest peak, Green Mt. (1762 ft.). There are numerous lakes and mountain tarns. Bar Harbnur is a favourite summer resort. Fishing and shipbuilding are carried on. Pop. (1910) 8000.

Mount Egorton, a vil. of Grant eo., Vietoria, Australia, 50 m. W.N.W. of Melbourne, in a gold-mining district.

Pop. 2500.

Mount Forest, a tn. of Wellington eo., Oatario, Canada, 70 m. W. by N. of Toronto, on the Saugeen R. There aro grist, flour, and woollen mills, and brick-fields. Pop. 2300.

Mount Gambier, a tn. of Grey co., . Australia, 228 m. S.E. of Adelaide. It is the centre of a very rich grain-

growing district. Pop. 8000.

Mount Lofty, a settlement and hill (2334 ft.) of Adelaido co., S. Australia, 11 m. S.E. of Adelaide. It is a

favourite resort. Pop. 5000.
Mountmellick, a market tn. of Queen's co., Ireland, 6 m. N.W. of Maryborough. There are woollen manufactures, potteries, iron and brass works, and extensive maltings, Pop. 2400.

manufs. include lumber, flour, gl and iron goods. There are coke

him an excellent position and he he-breeding nest, built on corn-stalks came director and president of the used as scaffolding, is an exquisite

centre of Plantagenet co., W. Australia, 30 m. from Albany. Pop. 1500.
Mount Carmel: 1. The cap. of Wabash co., Illinois, U.S.A., on the Wabash R., 24 m. S.S.W. of Vinternal Wabash R., 24 m. S.S.W. of the they then started the construction of the canadian Pacific Railway, which the Canadian Pacific Railway, which was completed in 1885. The following year he was made a baronet, and raised to the peerage in 1891, taking his title from a peak in the Rocky Mts. named after him while the railway was in course of construction. He left Canada in 1888, and has since lived in Eugland and Scotland. A

great philanthropist, ho has given generously to all kinds of charities.

Mount Vernon: 1. A city of West-chester co., New York, U.S.A., oa the Bronx R., 18 m. N.N.E. of New York. Pop. (1910) 30,919. 2. The cap. of Jefferson co., Illinois, U.S.A., 74 m. E.S.E. of St. Louis (Missouri). There is coal-mining and trade in lumber. Pop. (1910) 8007. 3. A tn. of Fairfax co., Virginia, U.S.A., on the Potomae R., 15 m. S. of Washington. Washington's mansion was purehased for the nation in 1859. Pop. (1910) 1500.

4. The cap. of Knox co., Ohlo, U.S.A., on the Vernon R. and Owl Creek, 40 m. N.E. of Columbus. It has engine works, foundries, mills, and a steel plant. Pop. (1910) 9087. 5. The cap. of Posey co., Indiana, U.S.A., on the Ohlo, 13 m. from the S.W. corner of the state. There are flour mills, immber and engineering works, and cooperages. Pop. (1910) 5563.

Mourne Mountains, a range in the ton's mansion was purchased for the

Mourne Mountains, a range in the S. of Down eo., Ulster, Ireland, extending 11 m. from S.W. to N.E. between Newcastle on the Irlsh Sea

petween Newcastle on the Irish Sea and Carlingford Bay. Sliove Donard is the highest peak (c. 2796 ft.). Mouseron, or Moeskroon, a com. and tn. of W. Flanders prov., Bel-gium, 7 m. S.S.W. of Courtral. Manufs. include woollens, cottens, tobacco, chicory, chocolate, and oil. It is n customs station. Pop. (com.) 21,000.

gold-mining number of small rodents of various

and iron goods. There are coke brewing industries. Pop. (1910) 5812. The fur varies greatly in tint and Mountstephen, George Stephen, Baron (b. 1829), a Canadian financier, in captivity. The whistling bird-like born at Dufttown, Banfishire, Scotland. He emigrated to Canada in 1850, and went into business in Month under mine at dusk is an instead, where his abilities soon secured inving a prehensile tail. Its spherical light an avecllent partition and he had breadler uses built on correstalks

structure. The long-tailed field M. is | tissue connecting with the superior a handsome, bold creature, and does much damage to farm and gardon crops, hunting for food at night.

Mouse River, a Canadian river (500 m. long), rising in Saskatchewan, flowing S. into N. Dakota, then E., turning sharply N., recrossing the frontier, and finally joining the Assini-

boin near Brandon.

Mousquetaires, a French word armed with meaning soldiers musket. Such soldiers were at first included in companies of pikemen in the proportion of one to three, whilst the muskots used were so heavy that valets were employed to carry them, until abolished by Charles IX. From 1600-22 M. were called carahineers, but resumed their old name under Louis XIII. After the king's M. had been suppressed, from 1646-57, Mazarin presented his personal guard to Louis XIV. in 1660, and there were to Louis XIV. in 1660, and there were thus from 1664 two separato forces known as 'white' and 'hlaok' M. Under Louis XIV. these companies formed in large measure a school for youthful nobles. M. were suppressed in 1775, reorganised in 1789, dishanded in 1792, reappeared in 1814, and finally aholished in 1815. Moussorgski, Modest (1835-81), a Russian composer. He left several choral and some instrumental works

choral and some instrumental works. in addition to three operas, of which Borts Godounoff (1874) is the chief, but his fame centres for the most part on his association with Cui, Borodin, Balakireff, and Rimski-Korsakoff in the nationalist move-

Mouth, the entrance to any cavity or canal; in particular, the entrance to the alimentary canal between the lips, including the cavity in which mastication takes place. The lips are folds of flesh composed of skin, arcolar tissue, or superficial fascia, the orbicularis ovis muscle, sub-mucous tissue, and mucous membrane. The cheeks are similar in structure, except that they are actuated by the buccinator muscle, which compresses the cheek and retracts the angle of the lips. The opening of the duct from the parotid gland is situated on the M. side of the cheek opposite the second upper molar tooth, while other salivary ducts are situated on the same surface. The gums are composed of mucous mem-

maxillary and palatal bones; the soft palate is composed of an aggregation of muscles. Diseases of the M. include caries and other affections of the teeth; stomatitis, or inflammation of the M., characterised by swelling, salivation, pain, and ulceration; salivary calculus, or stony concretions in the salivary ducts; and mumps, a highly infectious disease of the parotid gland, characterised by swelling and difficulty in swallowing.

Mouvaux, or Mouveaux, a com. of Nord dept., Franco, 7 m. N.E. of

Lillc. Pop. 7500.

Moville, a seaport and watering-place of Donegal co., Ireland, on Lough Foyle, 18 m. N.E. of Londonderry. It is a port of call for Transatlantic (American) steamers. 1200.

Moving Plant, or Telegraph Plant (Desmodium gyrans), an plant (order Leguminose Indlan Leguminosæ) pinnate leaves, the leaflets having a rapid up and down or rotatory movement especially in sunshine. It bears violet flowers, and is sometimes grown in the stovehouse.

Mowing Machines are of two main kinds, viz. those used for cutting

the object is to save the hay or fodder crop. The former, commonly called lawn mowers, vary in size from those for small lawns that can be pushed by a child to large machines driven hy a motor. Cutting is performed by steel blades arranged spirally on a cylinder which revolves near the ground. The agricultural implement has a long cutting-bar in which a series of knives work scissors-fashion from gearing attached to the carriage wheels.

Moyobamba, cap. of Loreto dept., Peru, S. America, 140 m. from Jaen, on a trib. of the Huallaga. Panama hats are manufactured. Pop. 10,000.

Mozambique: 1. A dist. of Portuguese E. Africa, bounded on the E. by the Indian Ocean. Area 100,000 sq. m. The principal rivers are the Rovuma, Zambezi, Pungwe, Sabi, and Limpopo. The vegetation is tropical, the chief products being sugar, cocoanuts, rubber, indigo, and tobacco. There are valuable coal doonnes are composed of mucous membrane superposed upon fibrous tissue posits in the Tete region, and gold is connecting with the periosteum of found on the Upper Zambezi. Pop. the jaw-bone. The teeth are fixed in 362,734. 2. Chief tn. of the above, the gum and jaw-bone, and the situated on a coral island. It has mucous membrane of the gum rises up round each tooth. The roof of the (1910) 4800. 3. A channel between M. is formed by the hard and soft the E. coast of Africa and Madagascar. palate. The hard palate consists Length (about) 1000 m., breadth from of mucous membrane and fibrous 260 to 600 m. At the N. entrance lie

the Comoro Is. See Iliveira Martins, Portugal em Africa, 1891; and R. N. Agricultural

who lived under Moorish rule in Spain, being allowed at the same time to retain religion. Thoy conformed almost entirely to the customs of almost entirely to the customs of their conquerors, even to the extont of using Arabio characters in the writing of Spanish. They were well treated, and continued to retain the Mozarabie liturgy. Mozart, Wolfgang Amadeus (1756-91), born at Salzburg. At the age of six he made his debut in Vienna as a

prodigy violinist and pianist; a year later he had published his first sonatas, and at the age of twelve, besides having the reputation of being able to play at sight any composition for organ, clavier, or violin, he had written an opera, a sym-phony, and a largo quantity of smaller works. By the time he was



WOLFGANG MOZART

twenty-five he was well known in Vienna, Muniell, London, Parls, and Milan as one of the world's greatest composers; overywhere he met with excellent receptions, not only by reason of his wonderful playing and brilliant genius as a composer, but also on account of his great personal charm and vivacious disposition. Leaving homo finally in 1781, he took up his abode in Vienna, where, in the course of the next twelve months, he married Constance Weber, whose his writings are: The Augustinian

sister, Aloysia, had not long pre-viously refused him. The marriage, though happy enough on purely grounds, mutual was hardly success in other respects. M. was none too wealthy, generous to a fault, and devoid of business capacity, and the ten years or so which yet remained to him were consequently passed in a hard struggle against poverty and debt. As a composer, M. is remarkable as the possessor of a gift of extraordinary fluency; as a melodist ho showed the same limpid beauty as Haydn; in the richness of his harmony and colouring ho anti-cipated Becthoven, and he was as skilled in counterpoint as Handel, if not of Bach himself. His orchestral musio is an advance on anything previously written, and many of his symphonies, especially the last three in E flat, in G minor, and in C, the Jupiter (all 1788), and some of his piano and violin concertos, are still able to hold their own as favourites with modern audicnees. His operas are perhaps his most characteristic works, showing as they do his superb technical mastery and inventive skill in the most felicitous bination, although his libreiti are often preposterously bad. His chief often preposterously dud. His enier operas were: La Finla Giardiniera and Il Re Pastore, 1775; Idomeneo, 1781; Le Nozze di Figaro, 1786; Don Giovanni, 1787; Cosi fau Tutti, 1790; and Die Zauberflöte, 1791. M. also wrote much church musle, a large number of instrumental sonatas and number of instrumental sonatas and vocal works, both solo and concerted, and a quantity of chamber music, his total compositions exceeding a thousand (standard ed., 1876-86). See Life by Otto Jahn (Eng. trans.), 1882. Mozdok, a tn. of Ciscaucasia, Russia, Terek gov., 50 m. N. of Vladikavkaz, on the Terek. It trades chiefly in furtit wine and silk. Pop. 15.000.

fruit, wine, and silk. Pop. 15,000.

W. m. S.S ics. manus. of leather, hardware, and beer, and trade in lumber, grain, and It contains a Roman llve-stock, Catholic cathedral. Pop. 11,000 (onc-

Chiloffe Cathedran. 1919 11,000 (childful like).

Mozley, James Bowling (1813-78), an English divine and theological writer, born at Galnsborough, Lincolnshire, and studied at Grantham and Orici College, Oxford, At the latter place he became intimate with the leaders of the Oxford Movement, in which he himself took part, until in which he himself took part, until the Gorham judgment compelled him to withdraw. In 1856 ho became vicar of Old Shoreham; in 1869 canon of Worcester; in 1871 reglus professor of divinity at Oxford. Among

Doctrine of Predestination, 1855; The starch M., is used for making enemas-Primitive Doctrine of Baptismal Re- A M. formed from the pith of sassa-

Primitive Doctrine of Baplismal. Regeneration, 1856; Review of the Baptismal Controversy, 1863; Theory of Development, 1878; and Essays Historical and Theological (2 vols.), 1878. Mstislavl, a tn. of Mohllev gov., Russia, 60 m. N.E. of Mohllev, with trade in hemp. Pop. 10,000.

Mtzensk, or Mtsensk, a tn. of Orel. gov., Central Russia, on the navigable Zusha R., 30 m. N.E. of Orel. There is trade in cereals, hemp, oil, eto. Candles, soap, tallow, and lace are manufactured. The cathedral The cathedral manufactured. contains a miraculous image of St. Nicholas, and there is a spring near by reputed to cure diseases. 10,000.

Mtzkhet, Mtskheta, or Mtskhet, a l. of Tiflis gov., Transcaucasia, ussla, ancient cap. of Georgia, at the confluence of the Aragva and the Kura. It contains a fine cathedral, and the tombs of many Georgian rulers. Pilgrims from the Caneasus

still visit M. Pop. 800.

Muanza, a dist. and vil. of German
E. Afrloa, S. of Victoria Nyanza. The dist. includes the rich cattle country Usukuma, and the barren Masai Ostutum, and the barren massar plains. The village, cap, of the dist., is on Smyth Sound near its entrance into Victoria Nyanza. Pop. of dist. 300,000; of vil. 3000. Much Wenlock, Sbropshire, Eng-

land. See WENLOCK. Much Woolton, sec WOOLTON. Mucilage, an aqueous solution of a gum: some gums form a clear solution in water, while others swell up to form a sticky viscous liquid, more properly called mucilage. The Ms. are used in the arts as adhesive substances, to thicken and stiffen cotton fabries, etc.; and in medicine as emollients or demulcents. Mucilago Tragacanthæ is prepared from the gum which exudes from the stem of Astragalus gummifer. The gum is imported which rights and the stem of the ported chicfly from Smyrna, and is in the form of thin twisted plates of a horny consistency. When mixed with water it swells by absorption, and is capable of absorbing fifty times its weight of water to form a thick M. It is used to thicken colours in calicodyeing, and in medicine to suspend insoluble substances, to make up pills, and as an application to irritated surfaces, particularly mucous membranes. Cherry-tree gum also forms a thick M. Gum kuteera and gum of Bussorahare often imported as adulterants of gum tragacanth; their properties are somewhat similar to those of gum tragacanth. Mucilago acaciæ is formed by adding 34 parts of acacia to water to make 100 parts: it is used as a substitute for mucilago tragacanthe.

fras is used as a soothing application for inflamed eyes, and also as a demulcent drink for inflammation of the mucous membranes and of the kidneys. Mucilago Ulmi is formed from elm gum: other Ms. are produced by infusing seeds, roots, etc.,

in boiling water. Mucin, a viseid substance, capable of being split up into a proteid, and a carbohydrate found in the human body in the bile, urine, fæees, saliva (in which it acts as a lubricant), and gastric juice, but most abundantly in intercellular substance. The presence of quantities of cane sugar in the stomach excites the production of mucus, and causes the digestion of the sugar which does not digest in the normal gastric secretion. M. is soluble in weak alkalies, and is precipitated from solution by alcohol and acetic

Muckers, a name given to a seet which arose at Königsberg, Germany. in 1835, its chief leaders being J. W. Ebel and G. H. Diestel. The opinions of the sect were so expressed as to cause an uproar directed against their sensuality. For a defence, see Mombert's Faith Victorious. 1882

Mucoid, a substance resembling mucin in many ways, but differing from it in some chemical reactions. M. is not precipitated from solution by acetic acid. Sometimes it precipi-tates slightly, but is then soluble in excess of acid. It is thus distinguisb-

able from mucin.

Mucous Membrane, see Epithelium. Mud, a term employed for the impalpable argillaccous matter which settles in quiet waters. When consolidated and devoid of lamination, The dark it is known as mudstone. blue muds of the sea bottom derive their colour from decomposing organic matter and sulphide of iron, while the green muds are so coloured from the glauconite grains which they oontain. Near coral reefs the sea floor is covered with white M. due to the abrasion of coral, while round volcanic islands a grey M. formed from degraded volcanic rocks is found.

Mudfish, or Bowfin (Amia calva), a fish occurring in the N. American lakes and rivers which has the airbladder highly developed as a lung sac. so that it can live out of water for a long time. It is about 30 in. long, and feeds It dark mottled green. voraciously upon crustaceans and insects, but its flesh is soft and ill-

flavoured.

Mudgee, a gold-mining tn. of Wellington co., New South Wales, on the Cudgegong R., 60 m. from Bathurst. Mucilago Amyli, or Wool is produced. Pop. 2800.

the founder of Mudie's Library in London, born at Cheisca. In 1842 lie opened a circulating library in Southampton Row. Ten years later he moved into the present premises, ne moved into the present premises, the present headquarters of Mudic's Lihrary, in New Oxford Street. He was deeply religious, and a great philanthropist. M. published Stray Leaves, a collection of hymns, in 1872. Mudki, a small tn. of the Punjah, India, 70 m. S.E. of Lahore, on the Ravi. Here the first hattle in the Sikh War was fought (1845), when the British, under Sir Hugh Gough, repulsed the Sikhs. Pom. 3000.

repulsed the Sikhs. Pop. 3000.

Mud Volcanoes are of two kinds: (1) Where the source of movement is the escape of gases: (2) where the active agent is steam. The former are conical hills formed by the accumulation of fine saline mud which is given out with various gases (marsh-gas, carhon dioxide, etc.) from an orifice or erater in the centre. The latter occur in volcanic regions, and are due to the escape of water and steam through beds of friable rock.

Muezzin, or Mueddin, a Moham-medaa official whose duty it is to announce the hours of prayer to the announce the hours of player to the faithful. This he does from the minarct or side of the mosque in a nasal chant. His call is as follows: Allah is great [three times]. I testify that there is no God but Allah [twice]. I testify that Mohammed is the apostle of Allnh [twice]. Come to prayer [twice]. Come to the best of works [twice]. Come to the near think twice]. There is no God but Allah.

Muffle, an arched vessel, used in metaliurgy, which is constructed to he placed over cupels and tests in the he placed over cupers and wood in the operation of assaying. It preserves them from coatact with ashes, smoko, etc., but does not hinder the action of the fire on the metal nor prevent inspection. For the furnace for firing: porcelain, ctc., called a M. furaace, see FURNACES.

Mufti (Arabic, expounder of the law). The Turkish Grand M. is the supreme head of the Ulemas (servants of religion and laws), and with the of rengion and mass, and win the Grand Vizir has the supreme guidance of the state. The Turkish laws being based on the Koran, the M., as head of the judges, is the chief spiritual authority, and is therefore sometimes

Mügeln: 1. A vil. of Saxony, Germany, 19 m. from Melssen. Pop. 7072. 2 A tn. of Saxony, Germany, 30 m. from Lelpzig. Pop. 3000.

Muggia, a scaport of Istria, Austria, oa the Gulf of Trieste, 4 m. S.W. of Trieste, with a fine harbour for warships. Pop. 11,481.

Mudie, Charles Edward (1818-90), originating in 1651, and founded by Join Reevo and Ludovic Muggieton (1607-97), both of whom claimed the possession of the spirit of prophecy. Muggleton, who was a journeyman tailor, professed to be the 'mouth' ef Reeve as Aaron was of Moses. They further claimed to he the two witnesses of Rev. xi. and to be empowered to curse their opponents. Their publications included a Re monstrance from the Eternal God, which was addressed to Cromwell. For this, among other reasons, they were imprisoned as public nuisances

and frequently for hlashhemy.

Mughla, or Mugla, a tn. of Smyrna
vilayet, Asiatic Turkey, 54 m. frem
Rhodes. Pop. 15,000.

Mugia, a com. of Corunna prov., Spaia, on the W. estuary of Cama-rinas R. Pop. 6400.

Mugwert, or Arlemisia vulgaris, a tall hushy plant (order Composite) with pinnatifid leaves, green above, and white and woolly beneath, and red and hrownish-yellow flower heads. Unlike wormwood (A. absinthium) M. is odouriess, but it was formerly infused to make a remedy for rheumatism.

Mugwump, originally an American political stang word applied, in 1889, to those of the Republicans who would not voto for the candidature of J. G. Blaine for the presidency. It was used in Massachusetts of those who considered themselves great and independent and above mero party politics. It now signifies an independent voter, or one who will net attach himself to any party, or who refuses to vote.

Muhalitch, or Mikhalitch, a tn. of Khodavendikiar vilayet, Asiatic Tur-key. 36 m. W. of Brusa. Pop. 7000. Mühlbach (Hungariaa Szasz Szbes),

a tn. of Hermannstadt prov., Transylvania, Hungary, on the M. (Sebes). The dist. is rich in wine. Pop. 7800.

Mühiberg, a tn. in the prov. of Saxony, Prussla, on the Elbe, 35 m. N.V. of Dresden; was the seene of the defeat of the Protestant Elector of Saxony by the Emperor Charles V. ln 1547. Pop. 3350.

Muhlenberg, John Peter Gabriei (1746-1807), an American preacher and seldier, bern in Trappe, Penn-sylvania. He eatered the Lutheran authority, and is therefore sometimes sylvania. He eatered the Lutheran known as Sheikh-ai-Islam (Lord of ministry, but gave up his eierleal career when the War of Independence broke out. He raised the 8th Vhrinia regiment (German), saw a great deal of service, and became brigadler-general in the continental army, 1777. He hecame vice-president of the Supreme Council in 1789, and rieste, with a fine harbour for war-lps. Pop. 11,481. was elected as a Domocratic-Re-lps. Pop. 11,481. publican to the United States Senate Muggletonians, an English sect in 1801, but resigned to become

supervisor of revenues for the district. of Pennsylvania.

Mühlhausen, a tn. in the prov. of Saxony, Prussia, on the Unstrut, 30 m. N.W. of Erfurt. The church of St. Blasius dates from the 12th cen-There are manufs. of woollen and linen goods, carpets, leather, and cigars, and a flourishing trade in cattle, grain, and fruit. M. was a free city in the 14th century, and was the headquarters of Thomas Münzer in the Peasants' War (1525). Pop. 35.083.

Mühlheim, a vil. of Hesse, Germany, 6 m. E. hy N. of Frankfort-on-Main. Pop. 6032.

Mühlinghausen, a com. and vil. of Westphalia, Prussia, 7 m. Ε.

Riberfeld-Barmen. Pop. 6375.
Muir, John (1810-82), a Scottish
Orientalist, born in Glasgow. In 1829 he went to India, studied San-skrit, and helped to further many schemes to assist the Hindus. In 1844 he was appointed principal of 1844 he was appointed principal of Victoria College, Benares, and in 1845 civil and sessions judge of Fatchpur. In 1853 he retired, and returned to Edinburgh and endowed the chair of Sanskrit in the Edin burgh University; he was the chief agent in founding the Shaw fellowship for moral philosophy. He was a D.C.L. of Oxford, a LL.D. of Edinburgh, a Ph.D. of Bonn, and a C.I.E. Muir, Sir William (1819-1905), a Scattley Deigotalist by better of the state o

Scottish Orientalist, brother of John M. He entered the Bengal Civil Service in 1837, was appointed secretary to the governor of the North-West Provinces, and was in charge of the intelligence department during the Mutiny. He was ment during the Mutiny. He was knighted in 1867, and in 1868 became lieutenant-governor of the North-West Provinces. In 1874 he was appointed financial minister India. He retired in 1876 and was elected a member of the Council of India in London. He was also elected principal of Edinhurgh University. Through his influence the Muir College at Allahabad was built and He was a keen student of endowed. Arabio. He wrote: Life of Mahomet and History of Islam; Annals of the Early Caliphates; and The Koran; its Composition and Teaching, etc.

Muiravonside, a parish of Stirling-shire, Scotland, on R. Avon, 31 m. S.W. of Linlithgow. Pop. 5300.

Muirburn (Scotch muir, a heath), in Scots law, a term denoting the in scots law, a term denoting the crime of setting fire to any heath or 'muir' from April 11 to Nov. 1. Penalty, 40s. for first offence, £5 for second, and £10 for suhsequent offences, or, in default, imprisonment for its resident. ment for six weeks, two months, and are warm min three months respectively. An old (com.) 13,000.

Act of 1400 forbade the burning of a M. in any month except March. and its object was the preservation of game. To escape liability for M. the tenant of the particular muir must show that the fire was communicated from some adjacent ground, or at all events caused by some one not in his family or scrvice. A proprietor of high and wet muirlands may, however, burn or authorise the burning of the heath between April 11 and 25, provided he is himself in occupation. Muir Glacier, a large ice-shect of Alaska, N. America, with 350 sq. m. of surface area, discharging into Glacier Bay. The trunk is formed of about nine main streams of ice. Earthquake disturbances dislodged part of it (1899). Its most rapid summer movement is ahout 7 ft. Its most rapid 200,000,000 day, and some cuhic ft. of ice are daily thrown off into the bay. Since 1794 it has receded about 25 m.

ceded ahout 25 m. Murkirk, a th. of Ayrshire, Scotland, on R. Ayr. There are mines of coal, limestonc, and ironstone, and blast-furnaces. Pop. (1911) 4982. Muizenburg, a watering-place of Cape of Good Hope, S. Africa, on False Bay, 15 m. S.E. of Cape Town. Cecil Rhodes died there (1902). Pop. 3600 3600.

Mukaddasi, the Jerusalemite(c. 947), an Arab traveller whose family name was Bashari. His best-known book is Description of the Lands of Islam, which is one of the most original and important Arabian geographical works of the middle ages. See The English translation (unfinished) by G. S. A. Ranking and R. F. Azoo, in Bibliotheca Indica (now series, 899, 952, 1000, etc).

Mukama, a tn. of Patna dist., Bengal, British India, 40 m. S.E. of Patna. Pop. ahout 13,000.

Mukden, or Moukden (Chinese Shenyang), the cap. of Shing-king, the southern prov. of Manchuria, 110 m. N.E. of Niu-chwang, on a branch of the Sherian Railroad. It is regularly built, surrounded by a solid built, surrounded by a solid built wall and divided into nine brick wall, and divided into nine parts. In the centre is the imperial palace (1631) and the administrative buildings. It is an important town on the trade routes hetween Manchuria and China. The chief exports are and China. The chief exports are agricultural produce and furs, and it is now open to foreign commerce. It suffered from fire during the Boxer rising of 1900. It was the site of a Japanese victory over the Russians in March 1905. Pop. 180,000. See K. yon Donat's The Battle of Mukden (Eng. translation), 1906. Mula, a tn. of Murcia, Spain. There

are warm mineral haths near. Pop.

Mulatto (Sp. and mulato (Sp. and Portuguese mulato, a diminutive of mulo; Lat. mulus, a mule), the offspring of a white person and a negro. The true M. is characterised by woolly black hair, and flat features, and is more usually the child of a black mother and white father. The degrees of negro bleed are indicated by ward. and write father. The degrees of negro blood are indicated by quadreen, three-fourths white, and one-fourth black, and octoreen, seven-eighths white, and one-eighth black, the Burkers and octored are sevenetc. But special countries have different terms for Ms. In Latin America they are sometimes called mestives, and in Brazil a M. is a pardo.

Mulberry (Merus), a genus of fruit-bearing trees of which the best known is the Black M. (M. niger), a native of Persia, and introduced to Britain in the 16th century. It is hardy only in the S. of England, and elsewhere needs to have the shelter of a high sunny wall. The sub-acid characteristically flavoured fruit, though it resembles a blackberry or raspberry, is of quito different structure, corresponding rather to a hunch of currants. The leaves are used as food for silkworms, but those of the White M. (M. alba) which is not so hardy, make tho

finest silk.

Muleaster, Richard (c. 1530-1611), an English philologist, born at Carlisle. In 1561 he was appointed head-master of the Merchant Taylors' School, and in 1596 became high master of St. Paul's School. He was a great disciplinarian, and insisted on physical training for children, and the higher education for girls. His best known works are Positions, and The first part of the Elementarie of the Right Writing of our English Tung, 1582, etc.

Mulch, a layer of material spread over the surface of the soil to provent evaporation, to supply plant food or to exclude frost. Straw, eccea-nut fibre, spent hops, grass, manure, ashes, or oven dry soil in a powdery condition 3 or 4 in. deep, act as Ms.

Mulder, Gerard Johannes (1802-80), a Dutch chemist, born at Utrecht. He was professor at Amsterdam, and afterwards at Rotterdam, specialising in physiological chemistry and the composition of albuminous bodies. Among his works are: The Chemistry of Wine, 1856; The Chemistry of the Vegetable World, 1864, etc.

Mule, the name given to any hybrid, but commonly the offspring of the male ass and the mare. The produce of a stallion with a female ass is called a 'hinny,' and is smaller and weaker than the M., and therefore less valuable. Ms. have the general shape of the horse, and sometimes measure as Screldan. Area 351 sq. in. Its sur-

Portuguese, ass they get its obstinate disposition. the head features and the less sensitive, weather-proof coat. As a rule, they are extremely hardy and practi-cally free from disease. They are as sure-tooted as a goat, and almost invariably possess great intelligence. They are bred in large numbers for use in countries where roads are bad, and extremes of weather have to be survived. They are useful as pack animals.

Mulgrave Islands, the collective name of various small groups of coral islands in the Paelfic Ocean, scattered between 30° S. and 12° N., and 160° and 177° E.

Mulhall, Michael George (1836-1900), a British statistician, born in Dublin. He went to S. America, and in 1861 started the first S. American in 1861 started the first S. American English daily paper, called the Buenos Ayres Standard. His chief works were: Handbook of the River Plete, 1869; The Progress of the Viverld in the 19th Century, 1880; and Fifty Years of National Progress, 1887. Mülhausen, a city of Alsaco-Lorraine, Germany, on the Ill and tho Rhine-Rhône Canal, 67 m. S.S.W. of Strassburg by rail. It is divided into the old town, dating from the 16th century, the new town, built in the

century, the new town, built in the 19th century, and containing the workmen's colony founded by Mayor Dollfus in 1853. It is the most important centre of the textile industry in the empire; other manuis, are

machinery and chemicals. M. becamo German in 1871. Pop. 94,967.
Mülheim: 1. Am. Rhein, a tr. in the Rhine prov., Prussia, on the Rhine, nearly opposite Cologno. It has breweries, tanneries, and dyo-works, and manufs of silks, velvots, ohemicals, machinery, and carriages. Pop. 2. Am Ruhr, a tn. in the Rhine prov., Prussia, on the Ruhr, 16 m. N. of Disseldorf. Coal and Iron are mined in the dist., and there are

manufs, of machinery, textiles, leather, and glass. Pop. 112,362.

Mulinari, or Molinari Stefano (c. 1741-96), Italian engraver, born in Florence. Little is known of his life, but his reputation rests on his numerous prints of early Italian masters, from Cimaine to Francesco Rustici, which he published in two volumes, under the titles Isotria practica dell'

under the titles Isotia practica dell' Incominciamento e Pregressi della Pittura, 1775; and Saggie delle cinque Scuele di Pittura Italiana, 1780. Mull, after the Isle of Skyc, the largest of the Inner Hobrides, Aryli-shire; Is washed on tho W. and S. by the Atlantic. Its coast is indented by numerous sea lochs, of which the principal are Loch-na-Kcal and Loch Screldan. Area 351 sa. m. Its surmuch as 16 hands high, but from the face is mountainous, rising in Ben

Mullah, or Mollah, the name given in Mohammedan countries to an official exercising the function of judge and expositor of the religious law, and to certain other members of

the clergy.

Müllenhoff, Karl Viktor (1818-84), a German philologist, born at Marne (Holstein). He held the appointments of professor at the University of Kiel, as well as the chair of German language and literature at Berlin. He wrote various books on philology and German antiquities, his masterplece being Deutsche Altertumskunde, 1870. Other works are Allgemsine Monatsschrift für Wissenschaft und Literatur 1850; Altdeutsche Sprachpreben, 1864; Sagen, Marchen und Lieder der Herzogthümer Holstein und Lauen-

burg, 1845.

Müller, Sir Ferdinand von (1825-96), a German botanist and explorer, born in Rostock. In 1846-47 he studied at Kiel University, also betanising in Schleswig and Holstein, and then emigrated to Australia through ill-health. From 1848-52 he travelled agence 4000 m betanistic and in some 4000 m. botanising, and in 1852 was appointed chief botanist to Victoria, then from 1855-56 he was botanist in A. C. Gregory's scientific expedition in N. and Central Aus-When back again he was director of the botanical s in Melbourne. He introtralia. made gardens in Melbourne. He intro-duced and exchanged plants with countries all over the world, and he will be chiefly remembered in introducing the eucalyptus tree into different countries, especially Algeria; he also raised the famous Victoria Regia water-lily. M. wrote valuable works on the eucalyptus, various botanical subjectgraphic

Flora and Pl

Müller, George (1805-98), a preacher and philanthropist, born near Halberstadt in Germany. He came to London in 1828 and spent the greater part of his life in England. He becamo minister of a church in Teignmouth, Devonshire, where he remained for two years and then went to Bristol. Always devoted to children, ho started taking in orphans to look after and care for. Gradually the numbers of these children inereased, and he took houses for them. until at last he had established an immense orphanage for 2000 ohildren, occupying five houses which he built for the purpose at Ashley Down just outside Bristol, and supported by voluntary contributions. He muller, Julius (1801-78), a Gerpublished a book containing his views, entitled *The Lord's Dealings* Brieg. He was appointed professor

More to 3185 ft. Chief town Tober- with George Müller, which had an mory. Pop. (1911) 4711. | with George Müller, which had an immense circulation, and roused immense circulation, and roused much sympathy with his scheme. When past seventy he went on a preaching tour through Europe, America, Australia, and China, and was absent for nearly seventcen years. He died at Bristol. See A. T. Pierson, George Muller of Bristol, 1899.

> Müller, Johann (1801-58), an eminent physiologist, born at Coblenz. He began to study with a view to orders in the Roman Catholic Church: but in 1819 he abandoned his theological studies, and devoted himself to medi-eine, taking, in 1822, the degree of Doctor of Medicine at Bonn. Whilst yet a student, he wrote for a prize the treatisc De Respiratione Fatus (1823). He became in 1826 an extraordinary, and in 1830 an ordinary, professor of physiology and anatomy at Bonn; and in 1833 succeeded Rudolphi as professor of anatomy at Berlin. His physiological researches were rewarded by many discoveries. His works are occupied with zoology and comparative anatomy. His investigations on infusoria were published in 1860.

> Müller, Johannes ven (1752-1809). a Swiss historian, born at Neunkirch, a Swiss historian, oorn at Neumkirch, near Schaffhausen. In 1772 he became professer of Greek at the Collegium Humanitatis at Schaffhausen. During 1778-79 he delivered a set of lectures on history which were published many years later under the title Vierundswanzig Bücher Allgemeiner Geschichte (1839). In 1780 he published the first volume of his Geschichten der Schweizer, and the following year his Essais historiques appeared. The same year he was made professor of history by the landgrave of Hesse Cassel, and in 1782 he published Reisen der Päpste. In 1783 he returned to Geneva, and in 1786 became librarian to the elector-archbishop of Mainz. In June 1786 the first volume of his Swiss history appeared, a second volume appearing two years later, and in 1787 he published a political tract Zur Darstellung des Fürstenbundes. In 1793 he became an imperial aulic councillor, and while at Vienna issued the third volume of his history (1795), a fourth volume following in 1805. In 1806 he espoused the cause of Napoleon, and the latter made him Secretary of State for Westphalia, and later a privy councillor and director of public instruction. The fifth volume of his history appeared in 1808. See biographies by Heeren (1809), Doring (1835), and Monnard (1839). Müller, Julius (1801-78), a Ger-man Protestant theologian, born at

und christliches Leben (1850-61). In 1833 he published Uber den Gegensatz des Protestantismus und des Catholicismus, which called forth a reply from Baur, whose criticism he was opposed to. At the General Evangelical Synod at Berlin (1840), he supported the Consensus-Union, and his pamphlets, Dic erste Generalsynode der evang. Landeskirche Preussens (1847) and Die evangelische Union, ihr Wesen und Göllliches Union, ihr Wesen und Gouttenes Recht (1854), were written in defence of his attitude. His principal work was Die christliche Lehre der Sunde (2 vols., 1839 · 5th ed., 1867), in which he putforward the theory that original sin was the result of the pre-existence of souls.

Müller, Karl Otfried (1797-1840), born in Silesia, he studied at Breslau and Berlin. Ho published Aggineti-corum Liber (1817), after which he soon received an appointment to the Magdalenum in Breslau, where his leisure hours were devoted to a grand attempt to analyse the whole circle of Greek myths. In 1819 ho obtained an archeological chair in Göttingen. His great design was to embrace the whole life of ancient Greece, its art, polities, industry, religion, in one warm and vivid conception. With this view he lectured and wrote until the political troubles in Hanover made his position uncomfortable. He obtained permission to travel, and made tours in Greece and Italy, but died of an intermittent fever at Athens. We are indebted to him for many striking elucidations of the geography and topography, literature, grapmy and topograpmy, manners, and eustoms of the ancients. His works

Prolegomenen zu einer wissenschaft-Lichen Mythologic, 1825; History of the Literature of Ancient Greece (trans. by Sir George Cornwall Lewis and Dr.

Donaldson), London, 1840.
Müller, Wilhelm (1791-1827), a
German lyrie poet, born at Dessau.
In 1817 he went to Italy, and his

ordinarius of theology at Halle (1839). Papieren eines reisenden Waldhornis-He was one of the founders of the ten (2 vols., 1821-24) and Lieder der Griechen (1821-24), the latter sym-pathising with the Greeks in their strugglo with the Turks. His earliest lyrics will be found in a volume of poems entitled Bundesblüten (1816), containing work by several authors. His other works are: Neugrichische Volkslieder (2 vols.), 1825; Lyrische Reisen und epigrammatische Spaziergange, 1827; and Homerische Vorschule, 1824. He also translated Marlowe's Faustus, and edited Bibliothek der Dichtungen des 17 Jahrhunderts (10 vols.), 1822-27. Many of his poems were set to musio by Schubert, and have become extremely popular. Sec edition of his Gedichte, ed. by his son, F. Max-Müller, 1868.

Mullet, a term for two distinct fish types: (1) The groy M. (Mullus) comprises about seventy species, of which three are found off the British coast. They are valued as food, especially when taken from fresh water, and they are cultivated in mullet pends in Italy and also in Honolulu (see Mugiline). (2) The red Ms. (Mullidæ) comprise about forty species, many of which are tropical. The common red M. (Mullus barbatus) has heen famed since classical times for its delicately flavoured flesh. Its average length is about 15 in., and weight 21 lbs. Its skin is a hrilifant red. Red Ms. have a pair of creetile barbels which "

forwards wher the sea hotton grooves at other times.

Mullingar, a market tn. of Ireland, cap. of the co. of Westmeath, is situated on the Brosna, 48 m. W. by N. of Dublin. It has a Roman Catholic cathedral. Tanning and hrewing are carried on. There are four annual cattle and horse fairs. Pop. (1911) 4500.

Mullion, a term in Gothie architecture applied to the upright bars, or rather stone shofts, dividing the general aperture of a window into secondary openings, which are again frequently subdivided vertically by a similar shoft crossing the Ms. horizontaliy, and therefore called transom.

Mulready, William (1786-1863), an Irish genro palater, born at Eunls, in eo. Clare. His father removed to London soon after William was born, Muller, Wilhelm (1791-1827), a German lyrie poet, born at Dessau, and here William had the help of In 1817 he went to Italy, and his first published work was Rom, Romerund Romerund (1820), while Academy, and in 1815 an associate gave his impressions of his visits. The same year he was mado librarian of the ducal library. His best work the ducal library. His best work the colouring and their perfection in the scontained in the volumes catitled Gedichte aus den hinterlassenen the National Gallery, London, c.g.

Multan, or Mooltan, an ancient and important city of India in the Pun-jab, on a mound consisting of the ruins of ancient cities that occupied the same site, 3 m. from the l. b. of the Chenab—the inundations of which sometimes reach M. -- and 200 m. S.W. of Lahore. Pop. 90,000.

Multiplepoinding, in Scots law, denotes an action (apparently first mentioned in an Act of Sederunt, 1677, as the proper process for settling the preferences of different arresters (see ARRESTMENT) whereby any number of different claimants to the same money, effects, or property, can obtain the decision of the court on the question of which is entitled, or, if more than one, in what proportions they are entitled. In all cases the they are entitled. In all cases the holder of the fund is nominally the pursuer (plaintiff), but, as a fact, any claimant may raiso the action. The action may be brought whenever double diligence (q.v.) has been either done or threatened, or wherever there are double claims on one fund, founded on separate and grounds. It was once consider

matter, however, is generally a sum of money, and must be such as the holder may be obliged to pay; hence rents to become due cannot be the subject of M. Usually M. is only subject of M. Usually M. is only competent where conflicting claims have been made, or where conflicting interests exist which may mature into claims. The one exception is in favour of trustees, or judicial factors, who are allowed to obtain judicial exoneration and adjustment of the rights of parties by this process. All persons interested in the subject-matter of the action may appear and produce their claims whether they are cited to appear or not. See Bell's Comment; Green's Encyclopædia of Scots Law.

Multiple Stars. Sir Wm. Herschell discovered that many stars were double, and in 1872 presented a catalogue of 269 such stars to the Royal Society. The number has since increased to over 100,000. A considerable number of stars have been found to be triple, quadruple, etc., tound to be triple, quantities, cost, up to clusters of vast number. The term 'multiple' includes all those above double or 'binary.' These stars are double, triple, multiple. in a physical sense, being actually in close relation, not 'optical' in the cost of the cost o close relation, not 'optical' in num ead, stars, appearing close because in nearly the which may finally be found to be as same line. To distinguish the difference, prolonged observation is necestary, and many cases are yet un-Handbook of Double Stars; Houzeau,

MultipleProportions, see Chemistry.

'Choosing the Wedding Gown' and differentiated. Physically, close stars 'Crossing the Ford.' describe curves due to mutual attractions of the control of the tion, while the proper notions of optically close stars show a reetilinear relative motion. In all cases the stars are observed telescopically with the filar position-micrometer to determine distance (seconds of arc between centres) and position-angle (angle made by distance line with the hour eircle). Photography is also used for distances above 4 secs. Binary stars, at present 250 at least have been determined, with distances between components from 30 sec. to isec. In about one-third of the cases the components are nearly equal; where unequal the larger is reddish or yellowish, the smaller green or blue, e.g. y Andromedac and 8 Cygni. In many cases only the relative orbit has been determined, in others the actual orbits, which are all of large eccentricity. The periods vary from five and a half to several hundred years. Spectroscopic binaries .- These are not resolvable by the telescope, but their spectra occasionally show doublo dark lines (see Mizar and An example is μ 34 hrs. 42.5 mins.;

heritable property could not y, 300 m. per sec.; subject of M., but recent decisions are radius of relativo orbit, 6,055,000 against that view. The subject m. (Pickering, 1896). Triple and multiple stars.-In the case of Caneri, two large stars revolve in an orbit less than 2 sec. diameter, period about sixty years; the third, smaller, more distant, orbit not de-termined, period several hundred years probably. Secliger has explained a perturbation as due to the existence of an invisible star. Lyræ has two pairs, each making a very slow revolution; the pairs havo a common proper motion and are probably revolving round a common centre of gravity in a period to be reokoned in millenniums. v Scorpii and 86 Virginis are quadruple; θ Orionis, sextuple; σ Orionis is double quadruple, and 45 Leporis shows five principal and four subor-

dinate stars. Many star clusters have been shown to be physically con-neeted and thus to form bigger systems of M. S. In fact, the spectroscope has enormously increased the range of our knowledge of the stars, and astronomical physics has claimed a much greater sharo of astronomy

rkers, among Belopotsky, e mentioned. sult of this

has of large

Not 1

Mum, an old German beverage, and still much used in Germany. It is a fermented malt liquor decocted in two or three strengths. It is dark coloured and sweet, its peculiar flavour being due to the addition of oat and pulse

Lucius, Mummius, surnamed Roman general, was Achaicus, a consul in 146 B.C., and after the conquest of Diæus in the Achæan war captured Corinth. All the inhabitants were slain, the artistic treasures sent to Rome, and the city burnt. It is probable that these cruel proceedings, which were foreign to M.'s nature, were carried out by order of the Senate. He was ecusor in 142 with Scipio Africanus the Younger.

Mummy, see EMBALMING. Mumps, an infectious disease characterised by inflammation of the parotid clands, and at times of the other salivary glands. Other names for the disease are parotitis, ennanche parotidae, and, in Scotland, the branks. After a period of incubabranks. After a period of incuba-tion of from two to three weeks, the disease shows itself by a swolling in the region of the parotid gland, which is situated in front of and below the external ear. There is also usually some degree of eatarrh, with slight febrilesymptoms, but these are seldom pronounced enough to occasion discomfort. As the disease proceeds, the swelling becomes increased in size and spreads downwards to the neck and round the angle of the jaw, eausing comparatively little pain but con-siderable disfigurement. The patient is otherwise quite well, except for some amount of discomfort attached to the actions of masticating and swallowing. It takes about four or five days for the swelling to reach its height, after which it gradually abates to a normal condition. Suppuration of the gland is a very uncommon occurrence. The disease does not call for much treatment. The diet should be that proper to a fobrilo condition. and the food should be soft enough to avoid painful mastication. Tho disease is highly infectious, and somotimes spreads with groat rapidity

Mun, Adrien Albert Marie, Comto 6580. de (b. 1841), a French politician, horn Mü

Vade Mecum. Also for a popular but, at Lumigny, entered the army and very hypothetical outcome, A.R., fought in the Algerian and Franco-Wallace, Man's Place in the Universe. German wars. He was elected to the Chamber of Deputies in 1876, and bas sat since that date, with the exception of 1879-81, and 1892-4, as a strong royalist and clerical. His adoption of Christian socialist views led to the establishment of the Cereles Catholiques d'Ouvriers. He brought the monarchist party to support the pretensions of Genoral Boulanger, and in 1892 he modified his violent anti-republicanism in obedience to the encyclical of Leo SIII., forming the new political group, les Rallier, those who rallied to the Republic. He was elected to the Academy in 1897, in succession to Jules Simon. See Ma Vocation

Sociale, 1908. Mun, Thomas (1751-1641), an English writer on political economy. He usa writer on political ceonomy. He was a member of the committee of the East India Company. In 1621 he wrote and published A Discourse of Trade from England unto the East Indies; and in 1630 produced England's Treasure by Forraign Trade; this latter was published by his son, John Mun.

John Mun. Munch, Andreas (1811-84), a Norwegian poet and dramatist, born in Christiania. He originally studied law, but gave this up, and from 1841-46 was editor of the Conservative journal, Den Constitutionelle. Ho was appointed amanuensis at the Univorsity Library in 1850, and in 1866 was made professor in the University. His greatest work was his coic entitled Kongedatterens Brudefort (The Bridal Journey of the King's Daughter), 1861, but he also won great popularity by the publication of his Poems Old and New in 1848. He also wrote other works, and transferd into Norwacian manufactures. lated into Norweglan many works of Scott and Tennyson.

Munch, Peter Andrews (1810-63), a Multil, refer Analows (12-05), a Norwegian historian, born in Christiania. In 1841 he was appointed professor of history at the University of Christiania, and in 1861 became keeper of the Record Office. Ho published many works of a linguistic eliaracter, and among them a Grammar of Old Norse in 1817, and also translated several of the Old Norse reted sagas. His History and Description of inno. Norway during the Middle Ages, 1849, ther is one of the best books on the history sted, of that time, but his chef d'aurre is ales, his History of the Norweyian People ales, (8 vols.) 1852-63. In is

on is Minchberg, a tu. in Upper Fran-asses conla, Bavaria, Prussia, on the Puls-off when the parotids take on their nitz, 20 m. N.N.E. of Bayreuth. There are manufs. of textiles. Pop.

Münchhausen, Karl Friedrich Hler-

the Turks, and on his retiring to his estate of Bodenwerder, amused and astounded his friends and relations by the extraordinary tales of his adventures during the war. A man named Rudolf Erich Raspe collected these tales and, adding many incidents from other sources, published a hook in 1785 called Baron Münchausen's narrative of his marvellous Travels and Campaigns in Russia. It was published anonymously with a preface by Bürger, who was at first believed to be the author; a second edition was printed in 1786, and two other editions rapidly followed. A. Cruikshank illustrated one edition (1869), and Gustave Doré (1862) another. The book has been enlarged hy the insertion of stories culled from See Lawrence and various sources.

Bullen's edition (1895).

Muncie, the cap. of Delaware co.
Indiana, U.S.A., 54 m. N.E. of
Indianapolis, on the White R. Iron, steel, and glass goods are manufac-tured. Palmer University is here.

Pop. (1910) 24,005.

Munday, Anthony (1553-1633), an English dramatist and miscellancous kinglish dramatist and miscellancous writer, born in London. He went to the Muras (a neighbouring tribe) and Rome (1578), probably as a spy to report on the English Jesuit College partly civilised, and are much of the whites, hut they are now partly civilised, and are much employed as rubber-gatherers, whereas they are faithful friends of the Muras, having made a peace with them in company. He wrote anti-Catholic pamphlets and translated romanees. In 1605 he was appointed chief mageant writer for the city, and hy pageant writer for the city, and hy these entertainments he won his There are eighteen greatest fame. plays ascribed to M., among them The Downfall of Robert Earl of Huntingdon, and the second play on the Death of Robert of Huntingdon, etc. He wrote several lyrics, some under the name of 'Shepherd Tony,' to England's Helicon (1600). He also wrote under the title of Lazarus Plot. Ben Jonson nick-named him the pageant poet.

Mundella, Anthony John (1825-97), English politician, horn He was an advanced Leiccster. Radical in politics, and was elected for Sheffield in 1868 for a division of which, Brightside, he continued to sit till his death. In Gladstone's ministries he was successively vice-president of the eouncil, and presi-dent of the Board of Trade in 1886 damask goods, jewellery, silver and 1892. He resigned in 1894, owing to his connection wi

company. His polit resulted in much use etc., especially in the of 1870, and the code

onymus, Baron (1720-97), famous for Factory Acts of 1875, and later. He narrating marvellous stories. He organised the 'labour department' served in the Russian army against at the Board of Trade, and modified the common law of conspiracy as affecting trade unions.

Munich

Münden, a tn. in the prov. of Hanover, Prussia, at the confluence of the Fulda and the Werra, 15 m. W.S.W. of Göttingen. It has manufs. of confectionery, chemicals, cigars. There are quarries and coal mines in the district. Pop. 11,455.

Munden, Joseph Shepherd (1758-32), an English actor, born in 1832), an London. After playing in strolling companies, he made his mark at Canterhury under Hurst. In 1790 he came to London where, until about 1811, he was the leading comedian. He was remarkable for the variety of characters he represented; he had a great gift of facial expression, which sometimes degenerated into

grimacing.

Mundrucus, or Mundurucus, a powerful tribe of Brazilian Indians, S. of the Amazon, on the R. Tapajos, generally classified with the Tupi stock. Physically and morally they are one of the finest of S. American races, and subsist mainly by agriculture. They are, however, bold warriors, and were long enemies of the Muras (a neighbouring tribe) and of the whites, hut they are now partly civilised, and are much employed as rubber-gatberers, whereas they are faithful friends of the Muras,

barren and flat elevated plain at a height of about 1700 ft. above the level of the sea. It is also the principal city of the province of Upper Bavaria and lies on the l. b. of the Iser. Its cathedral, which is the see for the archhishopric of Munich-Freising, was huilt between 1468-94, and is remarkable for its two square towers, with their octagonal upper stories, capped by cupolas, and its thirty lofty and highly decorated windows. Among the notable hulldings are the royal residence, the Pina-Kothek, the Glyplothek, the National Theatre, the National Muscum, and the Courts of Justice. Its public 1,300,000 library contains over volumes, and is rich in art collections. M. is noted for its enormous breweries of Bayarian heer, and has some good leather goods, wax-

per - hangings, carriages, ild, silver, and steel wares, ography is extensively en-The present name of this

city cannot be traced further than which gave them both the wealth and the 12th century, when Henry the the local organisation essential to the Lion raised the Villa Munichen from conduct of corporate affairs. M., not its previous obscurity, by establishing a mint within its precincts, and making it the chief emporium for the and the neighbouring districts. In the 13th century, the dukes of the Wittelsbach dynasty selected M. for their residence, built the Ludwigs-burg, some parts of whose original structure still exist, and surrounded with walls and other town fortified defences. In 1327 the old town was nearly destroyed by fire, aud rebuilt by the Emperor Ludwig of Bavaria very much on the plan which it still exhibits, but it was not the close of the 18th century, when the fortifications were razed to the ground, that the limits of the town were enlarged to any extent. The city capitulated to Gustavns Adolphas in 1632, and in 1742 it fell into the hands of the Austrians. Maximilian II. (1848-64) did much to further the arts and sciences by founding the National Museum,

Municipal Corporations, sec LOCAL

GOVERNMENTS. Municipalities (derived from Lat. municipium), a term which came subsequently to denote the duties (munus, duty or privilege) undertaken, and the privileges accepted, by the various Italian towns and other communities which stood in de-pendence on the city of Rome. Later the term municipia was applied to all urhan communities of Roman citizens in Italy with a definite organisation and a more or less complete system of self-government. The term municipality thus became the appropriate generic name both for citles or towns which enjoyed a measure of local autonomy, and for the conventional governing body of such cities or towns. In England the most ancient Ms. are those boroughs which can show an unbroken history back to the middle ages or earlier, when, in consideration of certain payments (like the firma burgi) they received royal charters of self-taxation and self-government. Other and later municipal corporations include principally large manufacturing towns which have acquired the status of county or non-county boroughs by charter or private Act of Parliament. (See Bonough, Bure-GESS, Corporation, Local Govern-MENT.) In most cases of ancient boroughs, history justifies the assumpof mayor, aldermen, and burgesses, and com or at least the common council, aroso system.

conduct of corporate affairs. M., not dissimilar in some of the essentials of English municipal corporations, exist making it the chief emporium for the in many countries; but those in the salt which was obtained from Halle U.S.A. differ in one important respect in that the various grades of members of the commonalty form distinct chambers under a bicameral system which reveals, as it were, the micro-cosm of a national or state legisla-ture. Mr. Sidney Webb (English Local Government) thinks that the clements of such a dualism appeared in the two classes (aldermen and common councillors) constituting the common councils of most of the close corporations, but that in one case only, that of the ancieut city of Norwich (and less completely at Ipswich and the city of London) did there exist a genuine bicameral constitution with a bree detected by stitution with a broad cleetoral hase. Apparently the constitution falled so completely that the Munlelpal Re-formers of 1835, in reconstructing English municipal government, were justified in ignoring such democratic mode of local government altogether. (For present constitutions of all municipal corporations see Borouou.) In Germany town-constitutions vary very considerably. In Prussla the executive council (magistrat) of a municipal commune is elected by the representative assembly of the citizens out of their own body; but in other parts of Germany, such as Alsace-Lorraine, which are influenced by French ideas, the executive is cleeted by the entire body of municipal electors. The mouopoly of local government usurped by the mediaval communes of classes and gullds was hroken by the reforms at the be-ginning of the 19th century, which vested in the citizens as a whole local administrative powers under municipal codes. History shows that the M., com-mune, or other urban corporate entity endowed with local autonomous privileges, has at various tlines arrogated to itself such formldable

political ascendancy as almost to render itself practically independent. N. Italy, at the time of the Lombard kings, and long before the hegemony of the last century, was essentially a region of independent city republics, each with an organisation not markedly dissimilar to that of the city. state of ancient Greece, and owing its anomalous position to the opportion that the municipal corporation tunities for the local tyranny of dukes of mayor, aldernuen, and burgesses, and counts afforded by the feudal This aristocratle or caste out of the Merchaut and Craft Guilds, tyranny was only undermined by for these latter possessed a common the rival spiritual power set up stock and corporate trading ventures under the ægis of the Christian curpire by the grant of Episcopal im- preservation of the central control munities, with the result that their have, if not actively exercised at some Italian city republics presented this curione and political phenomenon of a dual system of control, the religions and democratic acting as a counterpoise to the temporal and ducal. Much by the same process of evolution rose and waned the free towns of Germany (see Free Invernal Cities of the Swiss cantons. The English boroughs or ohartered towns had a different history. As the natural centres of trade they were early in a position to exact from necessitous overlords or needy monarchs, fiscal and judicial im-munities which soon enabled them to develop themselves into compact strongholds, with resources that in times of civil war or social upheaval were enough of themselves to decide the fate of contending factions in the state. But except in the Stuart period state. But except in the Stuart period those resources were seldom employed against the king, for it has been England's peculiar fortune that with rare exceptions the king and the people have always stood together against the nobility. In mediaval and modern times the English Ms. have been almost a microcosm of the central government, if we force the analogy of the bicameral system by substituting the corporate governing substituting the corporate governing body for the upper house and the burgesses for the lower. Where the central government has been absolute or autocratic, the M. has exhibited the close corporation of the guild wielding its powers for the personal benefit of its privileged members; and where the central authority has become constitutional and representative, the M. has followed suit by becoming a democratic body which, in recent years, has more and more through the action of municipal socialism, reflected the tendencies of the present government (1913). The municipal corporation of England, as we know it to-day, has acquired by legislation and custom such wide powere of self-government as to lead many writers on constitutional law and politics to assert that their powers are exercised with practically no interference from the central government. This view, however, hardly seems justified by facts (see LOCAL GOVERNMENT as to the relations bctween the central government and local authorities). Comprehensive as local autonomy may be in England, it is a latitudo within a strictly circumsoribed area, and since the days neither an old nor a new activity in when the central government of England became firmly fixed on a definite constitutional and democratic basis, the checks which political scientists have always formulated for the of the English burgessos. So far as

periods, at least been latent—a fact which is borne out hy the extraordinary degree of state control manifested in the legislation of the last six or soven years.

Municipal Trade. The steady growth of M. T. in England is not only the most remarkable aspect of modern municipal activity, but would seem by its silent progression to have drawn people of all shades of political opinion into the stream of its development before public opinion as a whole was truly conscious of its real political significance. The result of the sudden realisation during the first decade of the present century of the hugo increase in the aggregate expenditure of the various local authorities has been the formation of various societies, liko the London Municipal Society, and the publication of a respectable amount of literature, the objects and purport of which are, respectively, to proselytise people to the old ways of individualism by a direct appeal to their anti-socialistic sympathics. The rise of the Labour Party in parliament in 1906, and in particular the return to the House of Commons-from time to time of memhers of avowedly Socialist opinion, have mado the issue of socialism withties has been the formation of various have made the issue of socialism within the last few years the most bitterly controversial topic in England of modern times, and both sides have focussed their attention on the results of M. T. as affording irresistible arguments in favour of their respective political creeds—the anti-Socialists stigmatising it with the name of municipal socialism, pointing with alarm to Mr. Sidney Webb's manifesto that 'the path to the Town Utopia of Collectivism is unlimited municipalisation of local public services, and a wide extension of cooperate activity,' and lamenting the alleged portentous increase of rates and municipal debt; the socialist schools of thought acclaiming it as a subsidiary part or antecedent slope towards the full realisation of their dreams of state industrial organisa-tion, and combating the figures of their opponents by roference to the enormous increase in population and rateable value of property.

A short survey of the history of M. T. shows that it is not the product of modern conditions so much as the of modern conditions so much as the legitimate consequence of a process of evolution. Municipal trading is neither an old nor a new activity in social conditions, though in its present form and administration it

there is any conscious intellectual, authority 'as the march of politics operation involved in its promotion as distinct from the unsystematic extension of municipal operations arising out of, and rendered necessary by, the ever-widening range of duties imposed by the legislature on local governing bodies in relation to public health, the maintenance of highways and the relief of paupers, it may be taken to be the expression of the growing belief that it is incumhent on the social or civic conscience to supply the ohvious omissions of individual enterprise. It seems unduly alarmist and unwarranted by historical fact to assert that municipal trading is part of a vast and con-scious political move. It is far more in accordance with the hapbazard methods of English legislators to proceed as convenience seems to dictate without the slightest reference to ultimate ideals. If the M. T. is a per-manent feature in English social life, it is probably because public opinion on the whole is in favour of it, and if that is so nothing can stem the tide of its logical development, and it further seems to be the mere expression of prejudice to say that the citadel of local government has been stealthily captured by the administra-tive Socialist for the insidious pro-pagation, under the cloak of Pro-gressivism, of his creed.

In the early days of the English people, markets with their tolls and dues were the oldest form of local service and municipal trading. But whereas now the profits of any branch of M. T. would either go to the relief of rates or some other public or corporate purpose, this market revenue. where it did not become part of the corporate property of the horough, was appropriated by the king in consideration of the grant of a monopoly of trading to particular individuals in pursuance of the ancient royal prerogative of regulating all matters Ancient local governing of trade. bodies also had certain functions relativo to the provision of plers and harhours and doeks, and one highly secialistic function was performed both by municipal bodies or by the state, namely the supervision of the food supply, the regulation of the and

o ln the avowed interests of the people at large, fixed the prices of bread, ale, fnel, and other necessaries. It is considered by Mr. Towler, ln lis Socialism in Local Government, that these lnstances of communal action were net a supersession of existing private somewhat anomalous position now is effort, nor of competitive trading, but that though it has long been permerely works set up by the local feetly lawful for a municipality to

sslzo

unfolded and when individual energy was not fortbeoming to provide for the essential needs of the community;' and, further, that the food supply ceased to be a matter of local concern when better means of inter-com-munication between town and villages were established and trade oxtended generally. This, however, seems a better alternative to collective action, or to involve a contradiction, fer either there was individual trading or there was not; if not, what need fer regulations like those of the Assize of Bread and Ale unless they wero aimed at the municipality; and if there was, then no argument can be drawn from the supposed lack of individual energy to provide essential needs. If, as seems prebahle, from the language of these old statutes, the action of the legislature was a veto on the rapacity of mer-chants and traders, then there is no reason why the state should not, if economically feasible, revort to such methods of regulation; or, again, if the state already prescribes a mini-mum wage for certain trades, as it does, then why not a maximum price for the necessaries of life? During tho poriod of the merchant and eraft guilds, local administration exercised a vigorous centrol over Industry, generally with the object of derlying from merchants a profit for the par-ticular town. But there was no municipal trading proper. At the municipal trading proper. At the beginning of the 17th century a number of municipal corporations owned markets, docks, quays, piers. slaughter-houses, and a water-supply but with the rise of the industrial system and the corresponding decline In agriculture, unregulated competition and the expansion of individual commercial enterprise swept cellectivism in all shapes and forms for a time from the field. It was an age when publicists urged the limitation of governmental functions to the maintenance of order within the state and the protection of the state from external aggression, and it is. comparatively cently that the of the Fahlan awakened the oynical results of that unfettered individualism in industrial enterprise that looked to no end other than that of profit. Since this awakening there has been a complete rolle-face from the legal prohibition in force in the

first part of the 18th century against

nny municipality making a profit out

of its trading undertakings.

making as antithetical to the provision of the hest possible public services, never fail to meet the arguments of their opponents with counter arguments based upon the alleged profits of their trading undertakings.

The real beginning of modern M. T. was in the middle of last century, when the Baths and Washhouses Act, 1846, enabled local authorities to erect municipal baths and laundries, while later various Acts empowered them to control and manager harhouses and Jacks pairs. manage harbours and docks, piers, quays, and gas concerns. According to Mill, it was conclusively established, bowever, that government agency in any of the common operations of industry or commerce was never able to maintain itself in equal competition with individual agency competition with individual agency where the latter bad sufficient capital and enterprise. But M. T. nevertheless throve in spite of the arguments of political economists, especially when town or district councillors promised to secure the profits for the benefit of the general body of ratepayers. Many Socialists disagree with such allocation of profits on the ground that it is a concession to the proportied class, but cession to the proportied class, but it has proved a redoubtable factor in the cause of M. T., and has served to obsoure the undoubted fact that the small absolute profit made in many undertakings sinks into in-significance against the profits of those undertakings before helps acquired by the municipality from the private owners. During the jast quarter of the last century a number of local authorities obtained the passing of private Acts of Parliament passing of private Acts of Parliament enabling them to establish gas works, but only in those places where there were no existing private companies; and later, they were given the right to purchase the undertakings of electric and tramway companies after the lapse of a fixed period of time. In 1890, Part III. of the Housing of the Working Classes Acts empowered local authorities to huild dwellings for the working classes (see Housing of the Working Classes), and though the dearth of such accommodation in rural districts remains to this day (1913) a blot on the English social system, urban district councils have in more recent years availed themselves of these powers to an every increasing event. and though the dearth of such accommodation in rural districts remaximum prices, and regulations as mains to this day (1913) a blot on the English social system, urhan district councils have in more recent years availed themselves of these powers to an ever increasing extent. At the present day, there is no great extension of municipal trading so far as the nature of undertakings is concerned, and the principal municipal undertakings still comprise bnt little

make a profit, most advocates of outside waterworks, gas works, elec-M. T., while deprecating profit-tricity supply, tramways (whether tricity supply, tramways (whether owned and worked by the municipality or owned by the municipality and worked by private companies), baths and washhouses, burial grounds, har-hours, piers, and ferries, and workingclass dwellings, and markets. But one or two councils (e.g. Bradford and the Manchester Corporation) have made tentative proposals to secure statutory powers to purchase coal mines; a few London councils and Bradford Town Council have established milk depots to supply sterilised milk for children; many provincial towns availed themselves of an Act authorising them to raise money for nunicipal telephones (all of which have now been sold to the Post Office), the London County Council rau a disastrous steamhoat service, while a few have, with indifferent success, established a municipal motor-bus service. In 1911 the Brighton and Hove councils were at variance over the desirability of running a railless tram or bus service, and the pro-posal has not so far been proceeded with. In May, 1913, the Birmingham City Council sanctioned the experi-ment of the tramways committee in running a motor-bus service, and the committee proposed to purchase the buses at a cost of £10,000.

With the realisation of the full meaning of the growth of M. T. have come curiously unscientific defences which bear a striking resemblance to those advanced in the differentiation of Socialism from Liberalism (q.v.). It is contrary to the spirit of the English legislature to pass measures which in

any way put a premium on officialism at the expense of private liberty, and hence it is constantly attempted to set arbitrary limits to the so-called legitimate objects of municipal ownership and management. Logically, there would seem to be no limit at all, so far as the nature of the undertakings themselves is undertakings themselves is con-cerned, whatever moral sanction may be imposed by the actual conomic results of individual experi-ments in M.T. Mr. Towler submits the opinion that had the state thirty or forty years ago 'devised model frauchises, securing a good service, a share of profits for the ratepayers, meximum prices and regulations as sonably traceable to contaminated, the claiming 'gross' profit as indicamilk, are in themselves irresistible tive of financial success, the omission arguments for the establishment of from the accounts of particular undermunicipal milk cone

of economies if such

Moreover, the higher the degree of to charge accounts with a sufficient control the more imperceptible be-comes the line of demarcation between control and ownership, or in other words the more numerous the restrictions on the freest possible play of forces within the community, the greater is the tendency of 'personal rivalry and competition as tho fundamental impetus behind progress' to give place to collective endeavour.

The perform doubt at out the increase in participal day. Greenly a most participal is not a gainer as a whole from chean services, excellent sanitation, and so Major Darwin (Municipal) Trade), in showing how far beyond other countries England has gone in municipal trading, gives the following statistics of municipal debts;

Debt per Year head 1898 8 England £S ä United States 1890 2 1899 1889 3 1 14 01 Franco Italy. 1880 0 Belgium

(Municipal and \mathbf{Lord} Avebury these Trading) National quotes figures, and justly regrets that they cannot be given for the same year, moreover, Germany is an important emission. Lord Avebury thinks that

from reliab Mr. W. G.

involved, as compared with boroughs by the present writer to go beyond pointing out that there is undoubtedly

peuses paid out of the · xpenses being charged

sum on account of depreciation or

for establishment charges.

It is noteworthy that, in spite of vigorous writing against M.T., the Select Joint-Committee on municipal trading, appointed in 1903, devoted itself exclusively to municipal accounts, and though it condemned the then existing system of credit by Local Government Board district auditors, whom it considered not properly qualified to discharge their duties, its findings were silent on the

merits of municipal trading.

The following figures are abstracted from the latest (1909-10) annual local taxation returns. Only such totals have been taken as are explicable without reference to other accounts. In reference to the sums spent on housing, it is to be observed that these will include inter alia sums spent on improvement schemes or spent on improvement schemes or other unproductive work (see HOUSING OF THE WORKING CLASSES). Again, the amounts expended on harbours and piers, etc., will, so far as most local authorities are concerned, appear unduly small, but it is to bo borno in mind that there are special conservancy authorities for their conservancy authorities for areas in most cases (see last column on Table VI.).

Excluding the London County Council, the total sums in Table I. omission. Lord Arebury thinks that it is 'a moderate estimate that the great increase of municipal debt has been applied to the repayment of loans for all the price of municipal stock in the price of th (reproduced in substance as follows),

total repaid by local authorior all purposes was £13,220,575, the London Municipal Society, that of which no more than \$4,612,640 municipal electrical undertakings related to municipal trading purposes in spite of the fact that of the total having no municipal concern, a cost amount of loans outstanding against of £207 10s, per m, per street lighting local authorities, viz. £536,003,000 are as against £38 5s. Into the detail of tetre, over £300,000,000 are munithe finance of M.T. It is not intended cital trading loans. The total amount of the first of the result of the property of the amount of loans outstanding against of interest on loans for numbered trading purposes was £8,545,373, or about one-half of the total amount pointing out that there is undoubtedly trading purposes was £8,545,313, or considerable justification for assum-labout one-half of the total amount ing that in past years, at all events, by the parallel on hons for all purposes. A the method of book-keeping by the glanee at Table 11, may, however, spending authorities has been of an lead to the prima facic supposition apparently disingenuous mature, the that M. T. is economically a sound most striking instances of this being business proposition.

Table II .-- Aggregate Receipts of Local Authorities for 1909-10 and Earlier Years

	Revenue of	1884-85	1889-90	1894-95	0061-6681	1904-5	1907-8	1908-9	01-6061
	1. Water supply under- takings	2,086,249	2,515,217	2,875,984	2,086,249 2,515,217 2,875,984 3,730,219 4,509,858 4,768,338 4,909,627 5,499,201	4,509,858	4,768,338	4,909,627	5,499,201
. •	2. Gas supply undertakings (e.g. gas rentals)	3,302,119	3,867,416	4,750,738	3,867,416 4,750,738 6,035,526 7,092,515 7,648,814 7,487,871 7,484,429	7,092,515	7,648,814	7,487,871	7,484,429
	3. Bicetrio lighting under-	under- no return	no return	123,580	910,329	2,566,987	910,329 2,566,987 3,403,887	3,491,040 3,663,015	3,663,015
	4. Harbours, docks, piers, canals, etc.	2,226,098	2,485,270	2,226,098 2,485,270 2,689,762	2,967,062		3,334,585 3,614,507	3,680,681	6,091,847
5	Markets	617,775	654,891	723,841	827,411	946,648	993,660		991,445 1,013,420
•	6. Baths, washhouses, cemo- teries, sewage farms and works, singulter- houses, fire brigades, libraries, and museums, etc.	555,072	095,856		835,026 1,153,543 1,438,101 1,504,044 1,429,396 1,452,435	1,438,101	1,504,044	1,429,396	1,452,435

TABLE III.—ABSTRACT FROM LOCAL TAXATION RETURNS FOR 1909-10
OF MUNICIPAL TRADE ACCOUNTS FOR LONDON COUNTY COUNCIL

	Receipts, excluding Loans	Expenditure	Raised during 1910-11	Expended during	Outstanding at the end of the year
Tramways . Electric light-	£ 2,265,355	£ 1,380,827	£ 833,333	£833,333	£ 9,579,958
ing .	711,588	304,911 (other than public light- ing which amounted to £385,299)	192,479	196,723	5,460,975
Markets . Housing of the	251,878	129,299	2,570	1,340	3,040,490
working classes	••	101,659	105,220	94,593	4,835,056

A comparative table showing outstanding loans from 1906-11, particulars of which were furnished by council officers:

	1906-7	1907-8	1908-9	1909-10	1910-11
Housing of the working classes. Tramways . Thames steamboats and piers.	£ 3,991,709 6,133,564 277,556	£ 4,031,354 7,330,698 265,484	£ 4,035,879 8,126,697 253,475		£ 4,082,369 9,579,958 193,683

The disastrous nature of the Thames steamboat experiment may be inferred from the following progression of receipts from 1906-11 for 'Thames steamboats and piers': 1906-7, £40,786; 1907-8, £35,635; 1908-9, £5,492; 1909-10, £2157; 1910-11, £465.

Table IV.—The accounts of the Corporation of London show that the total receipts were £866,479, and the expenditure £857,708. Less than one-sixth of the total receipts was derived from rates.

roportions o	of tota	rece	ipts (£9	366,479) deri	ved 1	rom :	:		
Market re		and	rents,	sales,	divid	ends	and	profits	of	
_ other pre	operty		•		•	•		•		7
Rates			•			•	٠.	•	•	1
Other recei	ipts .	•		•	•	•	•	•	•	
										- 10

TABLE V .- TOTAL LOANS FOR ALL LOCAL AUTHORITIES

The loans received during 1909-10 for baths, cemeteries, electric lighting, gasworks, harbours, doeks, plers, canals, and quays (other than those of the Port of London), markets, tramways and light railways, and waterworks amounted to £8,575,111 or 20 per cent. of the whole of the loans raised by local authorities; the loans expended amounted to £7,236,703 or 17'8 per cent., while the loans outstanding at the end of the year amounted to £278,512,004 or 52 per cent. of the whole outstanding amount. The figures for the Port of London authority's undertakings were respectively: £22,570,459 or 53 per cent., £22,547,008 or 55'6 per cent., and £23,209,909 or 4'3 per cent.

		Other								
eing in brackets)	Hospital Boards and Committees, the Lancashire Asylums Board, and various Joint Authorities									
	_	Parish Councils								
	Rural District Councils									
190	sus	Boards of Guardians								
indicate during 1 first; that out of loa	Metro- politan Borough Councils									
	Corporation of London									
TING EXPE	vina Expendoans given f	Urban District Councils								
TABLE VI.—TABLE SHOWING BXPENDITURE DURING 1909-10 Expenditure—defrayed otherwise than out of foans given first; that out of loans being in brackets)	xpenditure—defrayed otherwise than out of it	Other Boroughs								
		County Boroughs								
		Other County Councils								
	(Expenditu	County	L.C.C							

£

:

4,654 (3,018)

207,817 (120,710)

a3 :

CH3

1, Baths, wash-Electricitht-

honses, etc.

çi

,

8,332

:

21,396 (30,483) 690

2,770 34,192

7,401 12,846) 35,673 (9,935)

12,866 (33,293) 72,965 (7,178)

85,486 (173,364) 261,962 (13,307)

(8,469)

(102,959)

(5,582)

1,418

297,181 (129,038)

181,643 (146,098) 080,166 (188,418)

236,570 178,644) 843,932 (59,597)

:

3. Gasworks ghting

. Harbours, plors, docks, canals, quays

÷

Housing of the working

Š

: : : :

:

:

1,138

8,613

(609) 162,700 (491,371)

:

:

(212,784) 296,701 (303,836)

(105,572) 283,249 (205,558)

7,469 (195,742)

railways

7. Tramway

6. Markets classes

8. Waterworks

	}	_	4 60
3	(81)	TYperation	Boards and Com-
,	acre		
DURING 1909-10	expenditure—defrayed otherwise than out of toans given first; that out of toans vehig in orderess		suer
NDITTORE	trst ; tha	u	opuo
TING EXPE	oans given ,		
TABLE VI.—TABLE SHOWING EXPENDITURE DURING 1909-10	otherwise than out of i	Town Councils	
TABLI	(Expenditure—defrayed of	COUNTY COUNCILS	
	- 1		

Muniong Range, mountains of New Inveraray. He started his journalistic/South Wales and Victoria, Australia, career in Glasgow, and his first story forming a part of the Great Dividing was entitled The Secret of Heathey Chain. Mt. Kosciusko (7308 ft.) is Ale (1893). Three years later he putthe highest point in the Australian continent.

Munipore, see Manipur.

Munkaes, a tn. of Hungary in Bereg eo., 80 m. N.E. of Debreczin. It is situated on the Latorcza, and has manufs. of coarse cloth. Near hy are noted alum and iron mines.

15,000.

Munkaesy, Michael von (1844-1900), an Hungarian painter, whose real namo was Lieb, was horn in Munkaes. After passing through severe vicissitudes through the death of his father tudes through the death of his lather and mother, he was sent by friends to the art school at Pesth. After some time he went to Vienna and then to Munich, where he studied under Franz Adam. At Dusseldorf he painted 'The Last Days of a Condemned Prisoner,' which made him famous. Soon after this he wont to Paris, where he resided for a great number of years. number of years. Here he won a number of honours and medals for number of honours and medals for his paintings. His eluie pictures are: 'Christ hefore Pilate,' The Crucifix,' 'Ecce Homo,' Arpad '(hung in the Hungarian parliament), 'The Apo-theosis of the Renaissanco' (Vienna), 'Tho Death of Mozart,' The Two Families,' Milton dictating Paradiss Lost to his Daughters.' The first three paintings are now in Philadelphia.

Munro, Sir Hector (1726-1805), a British general. His work has been done in India, where he suppressed a mutiny at Patna, 1764, and defeated the natives at Buxar, 1764. feated the natives at Buxar, 1764, He became heutenant-colonel in 1764, came hack to England, and in 1768 was returned M.P. for tho Inverness burghs. Ho was given a commission in Madras, 1777, when he went back to India, capturing Pondicherry, 1778, and Negapatam, 1781. He again returned to England 1782, and hecame successively major - general. lieutenant - genoral, and general in 1798.

Munro, Hugh Andrew Johnstone (1819-85), a Scottish classical soliolar and critle, born at Eigin in Scotland, and educated at Trinity College, Cambridge, becoming professor of Latin at the University. He cellted and translated the Vatican and Laurentian manuscripts of Lucretius, and edited Horace in 1868. His Criticisms and Elucidations of Cautturs (1878) contains some very valuable information, and he also wrote many alternately. Area 9520 sq. m. Pop. Greek and Latin verses, and contributed to the most learned and scholarly periodicals of his time.

Munro, Neil (b. 1864), a Scottish author and jonrnalist, horn at 65 m. N.E. of Düsseldorf. M., which Criticisms and Elucidations of Calullus

Ale (1893). Three years later he put-lished a collection of short storic, The Lost Pibroch. His novels are His novels are The Loss Proroch. His novels are chiefly historical, and include: John Splendid, 1898; Gilian the Dreamer, 1899; Doom Castle and the Shoes of Fortune, 1901; Children of Tempest, 1903; and The Daft Days, 1910.

Munro, Robert, M.A., M.D., LL.D., F.R.S. (b. 1835), a Scottish physician and archeologist, born in Ross-shire. He practized as a physician until 1888.

He practised as a physician until 1886 when he retired and devoted himself entirely to archeology and anthro-pology. He made a particular study of Lake dwellings, and his works inelude: The Lake-Dwellings of Europe, 1890; Prehistoric Problems, 1897; Pre-historic Scotland and its Place in European Civilisation, 1899; Archæology and False Antiquities, 1905; and articles on 'Stonehengo' and 'Stone Monuments' in the 11th ed. of the

Ency. Brit. Munro, Sir Thomas, Bart. (1761-1827), a military officer, born and educated at Glasgow. He was appointed infantry codet at Madras, 1779. Served in the war against Hyder Ali, 1780-81, then promoted to lleutenant. The civil administration of the Baramhal was formed 1792-99, in which he assisted Captain Read. He undertook the task of bringing to order the now province of Kanara. In 1804 M. was promoted to lieutenant-colonel, and rendered great services to General Wellesley (afterwards to General Wellesley (afterwards Duke of Wellington) during the war with Scindiah and the Rajah of Berah. In 1807 M. came back to England after an absence of twenty-eight years, and showed keen interest in the discussions regarding the renowal of the East India Company's oharter. He returned to India in 1814 on a commission to reorganise the judicial and polleo departments. During the Maliratta War he was brigadier-general. M. resigned all his commissions owing to bad health and roturned to England in 1819, when he was made governor of Madras.

Munster, a prov. in the S.W. of Ire-land, comprising the countles of Cork, Waterford, Kerry, Limerlek, Theorary, and Clarc. It was originally, i.e. before Henry II.'s reign, divided into two kingdoms, Desmond and Theorary and the title and runk of Thomond, and the title and rank of King of Munster was borne by the rulers of the respective kingdoms alternately. Area 9520 sq. m. Pop. (1911) 1,033,085.

the 13th and 15th centuries, was de-spoiled of all its internal

by the Anabaptists. The Gothic church of St. Lam 13th century. The industrial produets of M. include leather, woollen

fabrics, thread, starch, and Sugar. besides which there are good carriage manufactories, breweries, distilleries, and printing works. The trade is limited to the produce of the country. the principal of which are the noted Westphalian ham and sausages. Pop.

90,283. Münster, Sebastian (1489-1552), a German şeholar, born at İngeleiein. He entered a Franciscan convent, but becoming a convert to the opinions of Luther, he threw off his monastic Luther, he threw off his monastic habit, and was appointed professor of Hebrew at Basle in 1529. The most important of M.'s works are: Biblia Hebraica (2 vols.), 1534-35 and 1546; Grammatica Chaldaica, 1527; Dictionarium Chaldaicum, 1527; Dictionarium Trilingue, in quo Latinis Vocabulis, Græca et Hebraica respondent, 1530; Horologiographia, 1531: Orannum Uranicum, 1536; 1531: Uranicum. Organum 1536: Cosmographia Universalis, 1544; and Rudimenta Mathematica, 1551.

_ Münsterberg, a tn. in Silesia,

Munster-Ledenburg, Georg : Count zu (1820-1902), a Germa matist, born in London. son of a Hanoverian statesm was appointed minister to St.

burg (1856-64). He oxerted all his Dietsche and Weber (1875) and J. energies to prevent Prussia from von Kellerschokke (1890).

annexing Hanover, but having failed, he entered the Prussia field. he entered the Prussian diplomatic service (1866), and became a member of the Reichstog. From 1873 to 1881 he was ambassador to England, and

to France from 1885-1901.

Muntjac (Cervulus muntjac), a small deer which ranges throughout South-Eastern Asia. The hair is short and smooth and bright rufus bay in colour, with a patch of white on the throat and beneath the tail. The buck's head has the V-shaped frontal bone greatly prolonged into two pedicles covered with skin and hair; short antlers grow from the tips. In the upper jaw are two sharp canine teeth which often extend below the lower lip.

is a bishopric, is one of the hand-somest towns of Westphalia, retain-ing numerous remains of mediæval architecture, whose quaint pictur-esqueness is enhanced by the numer-ous trees and shady allees by which the squares and streets are orna-largely supplanted as material for regretad Theocethedral built between sheet him owing alcotoit towns regretad. mented. The cathedral, built between | sheathing. owing also to its lower price. Münzer, Thomas (1490-1525), Anabaptists (q.v.), born

Harz Mts. A Hussite preached exag-520), market-place, was finished in the gerated Christian liberty, opposing civil government, religious rites, etc. (1521). He headed an insurrection in 1524, but was defeated by the Elector John and Duke George of Saxony. the Landgrave of Hesse, and the Duke of Brunswick. He was beheaded at Muhlhausen along with

Pfeifer and a number of others

Munzinger, Werner (1832-75), Swiss traveller and linguist, born at Olten. In 1854 he went to Egypt and was in command of a commercial expedition, and then stayed in Keren, the capital of Bogos (1855). From Egypt he travelled into Eastern Africa, and in 1861 he joined Heug-lin's expedition to explore Central Africa and reached Kordofan. In 1864 hc was appointed British consul at Massowa, and was one of the explorers in the British expedition to The British, however, Abyssinia. gave up the expedition and M. then returned to Massowa as French consul. In 1872 ho was made governor-general of Eastern Soudan. Rudimenta Mathematica, 1541, and in 1875 was killed at Lako Assai. Münsterberg, a tn. in Silesia, in a fight with Gallas. During his Prussia, 37 m. S. of Breslau on the Ohlau; has manufs, of clay-products of and breweries. Pop. 8640.

1859; Ostafrikanische nd 1883; Die Deutche Ostafrika, 1865; and cabulaire de la langue ere are biographies by

Muræna, or Moray, a large eel-like fish without scales or pectoral fins, and distinguished from the true eels by the narrow slits into the pharynx. inhabit tropical and subtropical seas, nnabit tropical and subtropical seas, and are very fierce and voracious, scizing their prey with formidable pointed teeth. M. helena is rich brown, marked with yellow spots. Most Ms. are richly coloured, and some attain a length of 10 ft., particularly M. Macrurus of the Indian seas. Altogether some eight species seas. Altogether some eighty species are included in the family Muræindæ.

Murakami, a coast tn. of Hondo, Japan, 45 m. from Nügata. Pop.

10,000.

Mural Decoration (Lat. murus, wall). Muntz's Metal, or Yellow Metal, is the art of adorning walls by means of

surface painting in fresco, oils, or en- dispersed the Council of Five Hun-caustic, by mosaic compositions, and dred at St. Cloud in 1799, and in the by earving in wood, terra-cotta, stone, or marble. The term is also extended to the decorative treatment of vaults decoration, which was carried to great The walls were covered perfection. with figure and other designs, in iow relief, or deeply incised, and were gaily coloured. In Assyria, relief sculpture and colour decoration was recognised as forming an integral part of architecture. The walls were decorated with sculptured dadoes and coloured friezes, representing groups of figures. The sculptured friezes and metopes of ancient Greece, used as decorations for temples and public buildings, are of incomparable beauty. The Greeks did not use colour effects, relying entirely on the beauty of ontline and on shadow effects. The early Romans employed three priocipal methods of M. D.: painting in fresco, mosaic painting, and marble incrustations. The Romans, too, showed their love of colour by using marble, which they had brought away from their eastern and African conquests. later centurles, Italian artists painted in oils on plaster. Cimabue and Giotto painted in fresco, leading the way in a form of M. D. which superseded all others. In Northern Italy, striking colour effects were produced by using not only rich marbles but terra-cotta, and by skilful arrangement of bricks. In modern times the art of M. D. has unfortunately declined, though several attempts have been made to revive it. The chief forms of M. D. employed in domestic architecture are tapestry, embossed linen, wood panelling, stamped leather and wall-paper. Consult Thomas, Mural Decorations, 1869; Crowninshield, Mural Painting, 1887; White, Practical Designing; Baldry, Modern Mural Decoration, 1902; Jackson, Mural Painting, 1904. See also separate articles on Frisco,

Mosaic, Tapestry, Wall-paper, etc. Murano, a tn. in the prov. and 1; n. N. of the city of Venice, Italy, on the Island of Murano in the Venice Lagooo. It has the Cathedral of San Donnto (10th century). It has long been the seat of the Venctian giass Industry. Pop. 5500.

Murat, Joachim (1767-1815), King of Naples, born at La Bustide-Vencturies, non-Cather La Bustide-Vencturies, non-Ca

Fortunière, near Cahors, Francc. entered the French army, in which he served under Napoleon Bonaparte in Italy and Egypt, and became grently attached to him. For his part in the 13th vendémilaire he was made a lieutenant-colonel and first aide-decamp to Napoleon, and after Aboukir Murchison, a gold field of W. Auswas made a general of division. He tralla, N. of Lake Austin, 21,600 sq.

dred at St. Cloud in 1799, and in the following year married Napoleon's youngest sister, Marie Armoneinde Caroline. He was made governor of and ceilings. A great feature of early the Cisalpine republic in 1801, and Egyptian art was the internal surface after taking part in the battles of Jena, Eylau. Austerlitz, etc., was made Grand-Duke of Berg and Cleves for his share in the last-named. In 1308 he was crowned King of the Two Sicilies under the title of Joachim I. Napoleon; the Bourbons held Sicily, but Jonclum governed Naples wisely well. and After accompanying Napoleon to Russia, M. made over-tures to Austria and Great Britain because he feared Napoleon's treachery. When the latter esenped from Elba, M. thought he could himself win all Italy and then treat with Napoleon as an equal, but he was checked at Ferrara and routed at Tolentino. After Napoleon had refused his proffered aid, he staked his all on an expedition to Calabria, but his popularity had vanished, and he was cap-tured and shot at Pizzo. Muratori, Lodovico Antonio (1672-1750), a noted Italian scholar, anti-quary, and historian, born at Vignola, near Modena. In 1694 he became director of the Ambroslan College and Library at Milan, and while there published Anecdota Graca, and Anecdola Latina, previously unedited fragments. Recalled to Modena (1700). he became Ilbrarian and archivist to Duke Rinaldo I. His

three chlef works are: Rerum Hali-carum Scriptores, 1723-51, dealing with tl Medii history censti-Ævi, 1 . · of the tution, middle ages; and Annali d'Italia, 1744-49 (first complete ed. 1753-56), a critical history of Italy from the birth of Christ down to 1750. The Anti-chita estensi appeared in 1717-40. See Opers collected 1552-50 and 1750 Operc, collected 1767-80 and 1790-1810; Campori's ed. of the Epistolario,

1810; Campori's ed. of the Epistolario, 1901 ct seq. Consult G. F. Murator, Vita, 1750; Schedonl, Elogio, 1818; Tiraboschi, Bibl. mod., ill.
Muravieff, Count Michaei Nikolaievitch (1845-1900), a Russlan dlplomatist, born in Poltava, Russla; studied superficially at Heldelberg, and in 1848 entered the Chancellerie of Minister of Foreign Affairs. He held minor positions in Stuttgart, Berlin, Stockholm; later was second secretary in Berlin and first secretary secretary in Berlin and first secretary in Parls. In 1863 he incurred odlum through his drastle measures in dealing with the Pollsh Insurrection. He was appointed Minister of Foreign Affairs in 1807.

dist., 540 m. N.N.E. of Porth. Pop.

4000.

Murchison, Sir Roderick Impey (1792-1871), a British geologist, born at Tarradalc, Ross-shire, Scotland. He served with Wellesley in Galicia, 1808, and later under Sir John Moore, being present at the battle of Corunna. He left the army in 1816 and devoted himself to geology. He explored large parts of England and Scotland, and later travelled in France, Italy, the Tyrol, and Switzerland, studying the geological structure of the Alps. M.'s chief title to fame was the establishment of the Silurian system and his exposition of the Permian, Devonian, and Laurentian systems. Amongst other works, he published The Silurian System and The Geology of Russia in Europe and the Urals. See Life by Sir A. Geikie, 1875.

Murcia: 1. A maritime prov. of Spain, forming part of the ancient Moorish kingdom of the same name between Andalusia and the kingdom of Valencia. The state is very mountainous in the S. and E., but there are fertile valleys rendered fruitful by irrigation, and the celebrated 'buertas' (gardens), about 27 m. long and 3 m. broad, contain orange groves, mul-berry and olive trees, vines, etc., and produce quantitlos of fruit and vege-tables. There are largo deposits of salt, and minerals are abundant. The principal manufs, are metals and silks. M. was conquered in 713 by the Moors, and became a dependency of Moors, and becamo a dependency of Spain in 1240. Area 4453 sq. m. Pop. 600,489. 2. A walled city and episcopal see, cap. of abovo prov., 28 m. N.N.W. of Cartagena. It is an important industrial centre. The R. Segura divides it into two portions, connected by a fine bridge. The principal building is the oathedral, founded 1288. It has various results. founded 1388. It has various manufs. including a saltpetre and gunpowder factory. Pop. 124,985.

Murder. The generally accepted

definition of M. in English law is that of Coke: 'When a person of sound memory and discretion unlawfully killeth any reasonable creature in being, and under the king's peace with malice aforethought, either ex-press or implied '(see MALICE). Paraphrased this means: (1) That within limits children and idiots, or lunatics, cannot be guilty of M. But a lunatic; who kills another person may be confined in Broadmoor or some other eriminal lunatic asylum during the royal pleasure (see also Infancy and CRIMINAL LAW). (2) That the mere killing of another by whatsoever means, whether by an act or omission likely to result in death, raises a presumption of felonious homicide which

m. in area. Cue is the cap. of the the accused must robut by showing some instification (see JUSTIFIABLE HOMICIDE) or excuse (as, e.g., in self-defence). (3) That it is not M. to kill an infant in the womb, though such act of procuring abortion is punishable as a felony with penal servitude to the extent of life. But where a child born alive (in Scots law this is bold bold any one who beard the child ery; in English law by medical testimony that it breathed) afterwards dies by reason of drugs or wounds received while in the womb (a fortiori afterwards), those who administered such drugs or wounds are, according to the better opinion, guilty of M. (4) That it is not M. to kill an alien enemy actually participating in warfare against the state, but M. committed by a British subject upon a foreigner (not an encmy) abroad is an extraditable crime, and the murderer can be punished by an English court. (5) That the guilty state of mind essential to M., though generally one of sedate and deliberate intention to kill, may be inferred from any wanton or cruel act against another likely to result in death (see also Manslateh-result in death (see also Manslateh-ter and Malice). 'Constructive' M. means the killing a person while en-gaged in committing another felony, e.g. if a burglar fearing capture rushes so violently past an immate of the house as to cause his death, that will be M. however unintentional the killing. But in practice the death penalty is never inflicted in a clear case of merely 'constructive' M. There is no crime passionelle in English law, for no provocation bowever great will instify killing, though if there be no express malice (q.v.), the charge would be reduced to man-

slaughter. Suicide or self-murder is a felony punishable by imprisonment, but it is a commonplace of English criminal law that if two people agree to commit suicide together and one survives. the survivor is guilty of M. Accessories before the fact to M. are equally guilty and punishable with the principal offender; and an attempt to commit M. is punisbable witb penal servitude up to life. The punishment for M. is death, though in Anglo-Saxon times it was redeemable by payment of Wergild, or blood money, to the relatives of the murdered man. In some of the United States M. is classified into degrees. For example, M. by poison or by any premeditated design is M: in the first degree, and punishable with death; all other kinds of M. are said to be in the second

Murdock, William (1754-1839), a Near by was fought the battle of British engineer and inventor, born at Auchinleck, Ayrshire. In 1792 he used coal-gas as an illuminant in his own house, and ten years later it was used for lighting Soho. He also experimented on n high-pressure locomotive, and in 1784 made a small locomotive, and in 1784 made a small locomotive, steam-enging. He improved contributed to the Revue des Durger at Near by was fought the battle of Stone R. in 1862. Pop. (1910) 4679.

Murger, Henri (1822-61), a French popular work is his Scenes in Bothemian Life, portraying the irresponsible and lappy-go-lucky life of artists and students in Paris. He improved contributed to the Revue des Durger. motive steam-engino. He improved greatly on Watt's steam-engine, and invented apparatus by which it was to use compressed nir. possible devising the first oscillating steam-

engine. Mure, Sir William (1594-1657), n Scottish poet, horn at Rowallan in Ayrshire. He became M.P. in Edin-hurgh in 1643, the following year being

Boyd's Hecatombe translation of Christiana; and several miscellancous poems. Mure, William (1799 - 1860), British classical scholar and historian. born at Caldwell, Ayrshire. His principal work, Critical History of the Language and Literature of Ancient Greece, was unfinished when he died.

Greece, was unfinished when he died. His other publications include: Journal of a Tour in Greece and the Ionian Islands: Brief Remarks on the Chronology of the Egyptian Dynasties; A Dissertation on the Calendar and Zodiac of Ancient Egypt, etc.

Muret (or Muretus), Marc Antoine (1526-85), a famous French humanist, born at Muret, near Limoges. In 1563 le went to live in Rome, where ho lectured and taught civil law till 1584. lectured and taught civil law till 1584,

when he retired. Ho edited Latin when he retired. Ho edited Latin authors and wrote Orationes, Epistolæ, and Variarum Lectionem Libri XIX. See Collected Works, ed. Frotscher and Koch (Lelpzig), 1834-11.

Murfree, Mary Nonilles (b. 1850), an American novelist, writing under the pseudonym of 'Charles Eghert Craddock,' born at Murfreeslore, Tennessee, U.S.A. She began her literary career in 1878 with contributions to the Atlantic Monthly, consisting of pictures of mountaineer life in Ten-

pictures of mountaineer life in Tennessee, later published under the title of In the Tennessee Mountains. title of In the Tennessee Mountains.
Amongst her other publications are:
Where the Battle was Fought; The
Prophet of the Great Smoly Mountains; In the Clouds; His Vanished
Star; The Young Mountaincers; The
Champion; The Story of Old Fort
Loudon; 4 Spectre of Power; In the
Sterness Results Courtey of

London: A Spectre of Power; in the Stranger-People's Country, etc.

Murfreesboro, a clty and co. seat of Rutherford co., Tennessee, U.S.A., 132 m. S.E. of Nashville. It lies in an agricultural district, and carries on a considerable trade in cotton, grain, illustrative of humble life: in these, live stock, timber, etc. M. was settled the manner was darker and less refined in 1811 and becommended in 1817. than that exhibited in his later pie-In 1811, and incorporated in 1817, than that exhibited in his later pie-

contributed to the Revue des Deux Mondes and wrote a number of tales and dramas. Other works are: Scenes de la vie de jeunesse; Les buveurs d'cau; Madame Olympe; Le sabot rouge; and other prose tales, and a collection of poems entitled

Les nuits d'hiver. Andrew Lang has translated several of his songs in Ballads and Lyries of Old France.

Murghab: 1. Ariver of Central Asia, rising in Afghanistan and flowing W. and N.W. Into Russian Turkestan and N.W. Into Russian Turkestan through the oasis of Mero is lost in the sands 150 m. below Mero, after a course of about 370 m. 2. A river rising in the Pamirs, W. Asia, at an alt. of 13,720 ft., and flowing N.E., N.W. and W. to its junction with the

N.W. and W. to its junction with the Panj, or S. head-stream of the Oxus, at Wnkhan. Length 260 m. Muri: 1. A prov. of N. Nigerla, traversed by the Benue R. Pop. ahout 500,000. 2. A tn. of N. Nigerla, W. Africa, in Sokoto, 15 m. from the r. b. of the Benue, 300 m. E.N.E. of Lokoja.

Murillo, Bartholome Esteban (1617-82), was born at Scyllle, and baptised Jan. 1, 1618; and after recelving some education, was placed with his relative, Juan del Castillo, to study painting. Having saved n little money, which he made by painting religious pictures for exportation to S. America, he went to Madrid in 1641, heing then in his twenty-fourth year, was favourably notleed by his eclehrated townsman, Velasquez, who treated him with the greatest kindness, and through his influence was enabled to study the chefo-d'œurre of Italien and Florible are the chefo-d'œurre of Italien and Florible are the chefo-d'œurre of Italien and Florible are the chefo-d'œurre of the ch Italian and Fiemish art in the royal collections. In 1645 he determined to return to Seville, after an absence of three years, though advised to pro-ceed to Rome by Velasquez, who offered him letters from the klug. After settling in Seville he received numerous important commissions, and was soon acknowledged as the head of the school there. In 1618 M. married a lady of fortune; he now maintained a handsome establishment, and his house was the resort of

Murman

tures, which are mostly scriptural or and 20 m. N.W. of the tn. of Potenza. Amongst various religious picces. altar-pieces which he painted for the churches and convents in Madrid, Seville, Cordova, Cadiz, and Granada, is one representing the 'Marriago of St. Catherine,' and it was on the eve of his finishing this work that he met with an accident in the seaffoldinghe wounded himself so badly that he continued to feel the effects until his continued to feel the effects until his death, which occurred at Seville in April 1682. He was buried in the church of Sta. Crux. In the Louvre, and in England, there are about forty of his works. The most celebrated of M.'s pictures are: 'Moses striking the Rock,' 'Christ feeding the Five Thousand,' 'St. Anthony of Padua,' The Prodigal's Return,' and 'St. Elizabeth of Hungary.' The picture M. preferred to all his other works M. preferred to all his other works was that of 'St. Thomas de Villa Nueva distributing Alms to the Sick and Poor.' His chef-d'œuvre is the 'Immaculate Conception,' which was purchased for the Louvre at the sale of Marshal Soult's collection in 1852 for £26,612. Sir David Wilkie, who greatly admired and carefully studied the Spanish school, has remarked, in reference to it: 'Velasquez and Murillo are preferred, and preferred with reason, to all the others, as the most original and characteristic of their school. These two great painters are remarkable for having lived in the same time, in the same school, painted for the same people, and of the same age, and yet to have formed two styles so different and opposite, that the most unlearned can scarcely mistake them; Murillo being all softness, while andvivacity.

London, are 'The Holy the Lamb,' and 'A Boy Drinking,' Murman Coast, the N.E. coast of Kola Penin, Russian Lapland, ahout hot was Norway and the 370 m. between Norway and the White Sea. At the mouth of the Gulf of Kola is the port and naval station of Ekaterininsk. Cod fisheries are

important. Murner, Thomas (1475-1536), a German satirist and opponent of the Re-formation. He was born at Oberehn-heim in the Property of the Reheim in Alsace. In 1505 he was made poet laureate by Maximilian, and in 1513 hecame guardian of the Franelsean monastery at Strasburg. satirical works, directed against the Reformation and Luther, include Die Narrenbeschwörung, 1512; Von dem

Italy. Pop. 8500.

Murom, a tn. in the gov. of Vladimir, Central Russia, on the l. b. of the Oka R., 84 m. S.E. of Vladimir; has an old cathedral and various manufs. Pop. 13,400.

Muroran, a port and naval station in the prov. of Iburi, Yezo, Japan; has large steel works, and exports

timber and coal. Pop. c. 12,000.

Muros, a com. in the prov. of Corunna, Spain, 29 m. W.S.W. of Santiago. Pop. 9130.

Arthur (1727-1805), Murphy, A British actor

near Elphin, made his déb

at Covent Garden. He wrote numerous farces and dramas, amongst them Three Weeks after Marriage, Know Your Own Mind. All in the Wrong, etc., and some satires and a translatlon of Tacitus.

Murphy, Robert (1806-43), a British mathematician, horn at Mallow, Ireland. His chief publication is Elementary Principles of the Theories of Elec-tricity, and he contributed numerous

) the Cam-"ransactions Philosophical lso wroto a Algebraical

Equations.

Murphysboro, a city and co. scat of Jackson co., Illinois, U.S.A., 87 m. S.E. of St. Louis by rail. Coal and iron are mined. Pop. (1910) 7485.

Murrain, foot-and-mouth disease

(q.v.).

Murray, or Hume, the principal riv. of Australia, rising in the Australian

navigable for small steamers. chief tributaries are the Murrumbidgee, Lachlan, and Darling

Murray, Alexander (1775-1813), a Scottish philologist, born at Dunkit-terick. In 1806 he became minister of Urr, and in 1812 he was appointed professor of Oriental languages. His

processor of Oriental languages. His principal work was the History of European Languages, published after his death, and ed. by Dr. Scott, 1823. Murray, Alexander Stuart (1841-1904), a classical archaeologist, born in Arbroath, and educated at the Universities of Edinburgh and Berlin, at the latter he attended the lecture. grossen Ludherischen Narren, 1522; at the latter ho attended the lectures and Die Gauchmatt, 1519. Consult Kawerau, Murner und die deutsche In 1867 he was appointed assistant Reformation, 1891, and Murner un die Kirche des Mittelalters, 1890.

Muro Lucano, a tn. in the prov. Roman antiquities in the British at the latter ho attended the lectures

Museum, and on his death (1886) M. in 1855; became master at Mill Hill succeeded him. From time to time School, 1870; assistant examiner in he made researches in Rome, Athens, English to the University of London, Cyprus, and other parts of the Medi-

Murray, David Christie (1847-1907), an English novelist, born at West Bromwich, Staffordshire. In 1876 he was special correspondent for the Times during the Russo-Turkish War.

(1819-81),an English journalist, studied at Oxford and Inner Temple. He then served in the Austrian army, and two years later joined the British embassy at Hanoy

Odessa. E took up founded th The Queen libel in th

with perjul, trial he fied to Paris, where he wrote some brilliant articles for a few English papers. Embassies and Foreign Courts, The Roving Englishman, The Member for Paris, and and Young Brown are considered some

of his best works.

Murray, George Gilbert Aime (b. 1866), an English scholar, poet, and author, born in Sydnoy, New South Wales, and educated at Christ Church, Oxford University; was a fellow of New College, Oxford, and in 1889 became professor of Greek at Glasgow University, and in 1982 regime pro-University, and in 1908 regius pro-fessor of Greek at Oxford. In 1889 ho married Lady Mary Howard, daughter of the ininth Earl of Carlisle. He pub-lished a History of Ancient Greek Literature (1897). His verse transseveral

nia in Tauris, and Sopnocies' courses Rex (1902-13) are remarkable. Several have been staged with success under the Vedrenne-Barker management (1904-7). Of his other publications may be mentloued, The Rise of the Greek Epic, 1911: The Origin of Tragedy, 1912: and Studies in Greek Religion, 1913.

Murray, Sir James Augustus Henry (b. 1837), a philologist, born at Denholm, near Hawick, Roxburghshire.
He graduated at London and Oxford,
and received the degree of LL.D.
(Edin.) In 1874. He commenced
teaching at Hawick Grammar School of the third John M. A notablo recent

1875-79; and in 1885 went to Oxford. Cyprus, and other parts of the Media 1815-19; and in 1000 well to Union, terranean. He wrote Manual of For many years ho has been engaged Mythology, 1873; History of Sculpture, 1880-83; Handbook of Greek Archeology, 1892; The Sculpture of president of the Philological Society, the Parthenon, 1903. various papers. He is also the author of articles on the History and Language of the Border Counties, and The Dialect of the Southern Counties of Scotland.

He wroto numerous novels, the best of which are Bob Martin's Little Girl, Earl of, see Moray, James Stuart, Verona's Father, In Direst Joseph's Coat, and (with H. F. English publishers, and One Traveller Returns, ctc.

Murray, Eustace Clare Grenville with many a classic writer of English 1810 Clare County of English 2010 Clare Clare Grenville with many a classic writer of English 1810 Clare Clare County of English 2010 Clare Clare Clare County of English 2010 Clare Clare Clare Clare County of English 2010 Clare liferature. John (M')Murray (1745-1793), the founder, born in Edinburgh, and first served as an officer in the Royal Marines. In 1768 ho purchased of William became a or at 32 Fleet table publication story and of Greece. Dalrymple's Annals. At his death he was succeeded in due time by his son John M. (1778-1843), who was left an orphan of fifteen at his father's death. The second John M. began by himself editing many medical and other works, and projected, as a counterblast to th renowned enormous

Quarterly e activities. . Street became the resort of littera-leurs, including Walter Scott, of whose Marmion M. was part publisher, Southoy, Byron, Campbell (notably Specimens of the Poets), Washington Irving, and the critic Giford. Ho abandoned the publication of Byron's Memoirs as reflecting too much on their existing persons. In collabora-tion with Scott, Southey, and others, he published his Family Library of rojan popular and economic literature in 80 volumes, a work which is further notable by reason that M. lowered the conventional price to reach a wider elrele-a movement which has sinco been extended with such success

> Books, John M. (1808-92) succeeded his father and himself wrote numerous volumes of the Handbooks for Travellers, travelling extensively on

> in Dent's Everyman's Library. Another large series was Marray's Guide

publication was that of Queen m. N.E. of Rawal Pindi (alt. 7520 ft.). Victoria's Letters, which led to a libel Pop. 2000. action against the Times and heavy

damages.

Murray, John (1741-1819), an American clergyman, known as the 'father of American universalism.' He became a universalist after reading a tract on Union by James Relly. See Autobiography (Boston), 1816. ed. by Mrs. Murray.

Murray, Sir John (1718-77), Broughton, son of Sir David M. of Stanhope, Peeblesshire. He was secretary to Prince Charles Edward, and was employed on various missions

by the Pretender.

Murray, Sir John (b. 1841), a naturalist and geographer, born at Coburg, Ontario; and educated in Ontario; the High School, Stirling, Scotland; and at Edinburgh University. He was one of the naturalists who made that famous voyage in the Challenger, and was appointed editor of the reports of the expedition. He also took part in the expeditions in the Trilon and Knight Errant to the Faröe Channel. Besides the above roports he was one of the authors of The Narrative of the Cruise of the 'Challenger,' of A Report on Deep-Sea Deposits, and of A Report of the Survey of the Lochs of Scotland. He has also written numerous articles on geographical and marine subjects.

Murray, Lindiey (1745-1826), an Anglo-American grammarian, born at Angio American grammarian, born as Swatara, Pennsylvania. He was called to the bar in 1765. In 1784 he settled in Engiand, and devoted himself to literature. His first book was Power of Religion on the Mind, 1787. Later he wrotethe Grammar of the English Language. guage, 1795, by which he is chiefly remembered. These were followed by works, Englishvarious sucb as

Readers, etc.

Murray, Sir Robert (1600-73), son of Sir Rohert M. of Craigie, Ayrshirc, one of the founders of the Royal Society. He fought in the Civil War. At the Restoration he was appointed Lord Justice Clerk and Privy Coun-cillor. He became a prominent member of the club in London instituted for the discussion of natural science which developed into the Royal Society. He obtained a charter for the society from Charles II., and was made the first president, 1662.

Murray Bay, or Malbaie, a wateringplace and bay of Charlevoix co., Quebcc, Canada, on the Lower St.

Lawrence R. Pop. 4300.

Murraysburg, a vil. and div. of Cape of Good Hope, S. Africa. The vil. is 50 m. W.N.W. of Graaff-Reinot. Pop. (vil.) 1300,

sanatorium of the Punjab, India, 30 and crossed to Spain, taking several

Mürren, a vil. of the Bernese Oberland, Switzerland, 3 m. S.W. Lauterbrunnen. It affords a fine view

of the Jungfrau. Pop. 200. Murrhine (or Myrrbine) Vases, celebrated vessels of antiquity, brought from Asia to Rome by Pompey, after

his victory over Mitbridates.

Murrumbidgee, a riv. of New South
Wales, rising on the N.E. of the Australian Alps, and flowing 1350 m.

westwards to join the Murray, 90 m.

S.E. of the mouth of the Darling. It is navigable for 500 m. during the wet season.

Murrumburrah, a tn. of Harden co., New South Wales, 80 m. from Goulburn, with gold-mining. Pop. 1500.
Murrurudi, a tn. of Brisbane co.,
New South Wales, 50 m. from Tam-

worth. Pop. 1300.

Murshidabad, a city and dist. of India in presidency of Bengal. The city lies 115 m. N. of Calcutta, and extends along both sides of the sacred river Bhagirathi. During most of the 18th century it was the Mohammedan

flourishing It contains

handsome structure. The industries include the manuf. of silk and other fabrics, embroidery, and articles of carved ivory, gold, silver, etc. The entire ivory, gold, silver, etc. district covers an area of 2143 sq. m., and the population numbers about 1,333,184. Pop. of tn. 15,000. Murtoza, a fishing centre of Aveiro, Portugal, 30 m. S. of Oporto. Pop.

10,000.

Murzuk, a walled tn. in Tripoli, cap. of Fezzan, 430 m. S.E. of Ghadames, situated in an oasis in the heart of the desert. It is a commercial centre on a caravan route from Egypt. Pop. 6500.

Mürzzuschlag, a tn. of Styria, Austria, on the Murz, 24 m. from Bruck. It is a noted health resort. Bruck.

Pop. 6190.

Musa, Abu Abdallah Mobammed Ben, an Arabian mathematician, the first of his countrymen to write on the science of algebra, and to whom Europe is indebted for its introduction.

Musa, Antonius, a famous Roman physician, and a brother of Euphorbus. Is said to bave been the first to recommend the use of cold baths, and cnred the Emperor Augustus by this means. Was also of a literary bent and acquainted with Horace.

Musa, Ibn Nosseyr, or Nosair (640-715 A.D.), Arab conqueror of Northern Africa in 699-709. In 712 he Murree, or Marri, a hill-station and formed an alliance with Count Julian important towns, amongst Seville. On his return he fell under displeasure of the Calif Damascus, who exiled him.

Musæus, a Greek grammarian who flourished about the 5th century A.D. He wrote an erotic poem, describing the loves of Hero and Leander, which has been translated into English more than once, notably by Christopher Marlowe (Dilthey's ed. Bonn, 1874). Musæus, Johann Karl August (1735-

87), a German author, born at Jena. His first work, entitled Grandison der Zweite, was published in 1762; re-written about twenty years later under the title of Der deutsche Grandison, its object being to satirise the English novelist Richardson's hero. ""ark was: Voll:smi a series of sat 1782-86. See

äus, 1867. 1, a constellation situated E. of Chameleon, and S. of the Southern Cross, also sometimes known under the name of Apls (the bee), and formerly used to designate a constellation N. of Aries. It contains four stars, one of the third and three of the fourth magnitude.

M.

Muscardine, or Silkworm Rot. a disease which canses much loss among silkworms. It is eaused by a fungus, many allied species of which are parasites in Lepidoptera, both in the cater-

pillars and the perfect insects.
Muscari, see GRAPE HYACINTH. Muscat, a tn. and scaport on the Muscat, a tn. and scaport on the S.E. coast of Arabia, cap. of prov. of Oman. It is under British political influence. The climate is hot and unhealthy. Dates are the principal export. M. was taken by the Portugueso in 1508 and remained under their rule till 1650, when they were freally expedied. Pan about 40,000.

finally expelled. Pop. about 40,000.
Muscatel, Muscatelle, Muscadel, or
Muscadine (it. moscado, musk.), a
white wine produced in Languedoc, France, both strong and sweet. Tho name is generally applied, however, to most French and Italian wines made from the muscadine grape, either of the red or white variety.

Muscatine, a city of Iowa, U.S.A., on the r. b. of the Mississippi. Manufs.

include pearl buttons, terra-cotta, pottery, cto. Pop. (1910) 16,178.

Muschelkalk, in geology, a lime-stone-bed belonging to the Red Sandstone formation or Triassle system of It is shelly and fossili-Germany. ferons (rich in organie remains), and Saurian reptiles occur. found in Britain.

Muscle, a structure of the body capable of causing motion by the contraction of its fibres. Muscular tissue consists of elongated cells or fibres. The fibres making up some of the Ms.

them | consist of protoplasmic material with transverse stripes; these are called striped or strigted fibres. Others possess no transverse markings, and are therefore known as non-striated or reme museu-

:ontract •

ı eertain

brought about, resulting in a change in the elastic tension of the cell. An increase of tension occurs in the points of attachment of the cell to neighbouring tissues, which ordinarily move under the strain, so that the length of the fibre decreases, while its diameter becomes proportionately bigger. In some Ms. this contraction is voluntary; that is, it is the result of an act of will. This modification of consciousness is accompanied by a ecrtain mode of activity in some of the cells of the large brain, or ecrebrum. By this means an impulso Is communicated to the nerve-fibres supplying the Ms. and is conveyed to the M. by ϵ

the nervo-1 face of the are not under the control of the wil. Such are the Ms. causing the motion of the stomach and other parts of the alimentary canal. They are called involuntary Ms., and are made up of non-striated fibres, except the oardino M., which resembles voluntary Ms. in being striated. The capacity of a M. for responding to a stimulus is termed its excitability. In cardlac M. the extent of contraction does not depend upon the intensity of the stimulus, but in Als, attached to the bones a proportion is maintained between contraction and stimulus. If, however, a M. has been repeatedly contracted without much intermission, a stimulus does not ovoko the usual extent of contraction does not depend

οľ waste products, probably CO, in the muscular tissuo, which diminishes its excitability. After a period of rest, cacaminy. After a period of rest, the waste products are climinated, and the M. regains its normal power of responding to stimuli. The fieshy part of a M. is usually attached at each end to bands, or leadons, of white fibrous tissue, which is itself non-contractile, but serves to join the M. to some bone. The attachment which is more fixed is called the which is more fixed is called the origin; that which is more movable is called the insertion. Thus, the It is not biceps has two origins, in the corneold process and the glenoid cavity; its insertion is in the tuberosity of the radius, or the outer bone of the forearm. Every M. is supplied with blood-vessels, and lymphatics to carry the substances for repair of tissue, and for

the combustion which liberates the Britain does not usually form the eaergy resulting in contraction.

were, according to the earliest writers, the inspiring goddesses of song, and, according to later notions, divinities presiding over the different kinds of poetry, and over the arts and sciences. They are usually represented as the daughters of Zeus and Mnemosyne, and born in Picria, at the foot of Mt. Olympus. Their original number appears to have been three; but afterwards they are always spoken of as nine in number. Their names and attributes were 1. Clio, the M. of history, represented in a sitting or history, attributed with a conen roll. astory, represented in a sitting or standing attitude, with an open roll of paper, or ohest of books. 2. Euclerge, the M. of lyric poetry, with a flute. 3. Thalia, the M. of comedy and of merry or idyllic poetry, appears with a comic mask, a shepberd's staff, or a wreath of ivy. 4. Melpomene, tho M. of tragedy, with a tragic mask, the club of Hercules. a tragic mask, the club of Hercules, or a sword: her head is surrounded with vine leaves, and she wears the cotburnus. 5. Terpsichore, the M. of choral dance and song, appears with the lyre and the plectrum. 6. Erato, the M. of erotic poetry and mimic the M. of erotic poetry and mimic limitation, sometimes also has the lyre. 7. Polymnia or Polyhymnia, the M. of the sublime hymn, usually appears without any attribute, in a pensive or meditating attitude. S. Urania, tho M. of astronomy, with a staff pointing to a globe. 9. Calliope or Calliopea, the M. of epic poetry, represented in works of art with a represented in works of art with a

Helicon, where were the sacred foun-tains of Aganippe and Hippocrene. Mt. Parnassus was likewise sacred to them, with the Castalian spring. sacrifices offered to the M. consisted of libations of water or milk, and of honey. The M. were invoked by the poets as the inspiring goddesses of soag; and all who ventured to compete with them in song were severely

of scientifio, literal osities and works

the benefit of the the kind was the famous university trol of the Smithsonian Institution. building at Alexandria (including the Museums may be under national,

lergy resulting in contraction. sole or oven the most prominent Muses (Lat. Muse, Gk. Movou) feature of M. properly so called, ere, according to the earliest writers, though on the Continent the terms musée 'and 'museum 'are regularly used for sueb collections. These institutions remained practically unknown from the 4th to the 17th century, and the earliest were mcrely of curiosities, aimless collections amassed without method or system, usually by private individuals, such as the Tradescant Museum, which became more valuable as the Ashmolcan Museum (c. 1679), at Oxford. The growth and development of the modern M. was a feature of the later 19th century, the chief aims (as enunciated in 1870) heing (1) to provide education, and (2) recreation for the people. Special attention is now given to arrangement and classification, to the cataloguing and preservation of the exhibits, and to the lighting, ventilation, and general comfort of the galleries. It is essential to avoid overcrowding the exhibits. The three chief systems for classification of the objects on view are: (1) by date; (2) by material; (3) hy nationality, none of which are, as a rule, adopted exclusively, but in combination. Ideal M. should embrace as far as possible the whole range of human knowledge, teach the connection between all the different branches of learning, and destroy the arbitrary distinction drawn between M. of 'science' and of 'art. Lack of space has sometimes heen responsible for such separations, notably in the case of the transfer of the Natural History specimens to Cromwell Road, S. Kensington, from the British Museum in Bloomsbury (founded c. 1753 from the Sloane collection). The Guimet the Sloane collection). The Guimet

m at Oxford of man-made

Surgeons is a M. of Comparative Anatomy. Noted M. of wider and more general aim are the Vatican in Rome (started by Pope Julius II.), the Uffizi and Pitti (chiefly painting and sculpture) at Florence, the Louvre of Paris (opened to the public of 1780) if at 5t Paris. punished by them.

Museums (from Gk. µovocior, temple of the Muses), the name now given to buildings where collections of scientific, literal

Forence, the Louve that Superior to the Double of Farisa Special Parts of Special Parts of Par

Museum National (c. 1876), under the con-

library). Here were ledged and entertained the men of learning, each of whom had a handsome revenue. Its foundation is attributed to Ptolemy Soter (c. 283 B.c.). A library or picture gallery may be included, but in Hunterian Museums' of the Royal

formerly had many collections owned by her merchant-princes. Thovarious great exhibitions, and especially that of 1851, did much to promote in-terest in M. and led to the establish-

ment of many in the 19th century.
In early days M. were for the fow rather than for the many, as has also been noticed in the case of libraries, and visitors were only admitted a few at a time on payment of a fee, or hy special ticket. The British Museum was first opened to the public in 1759, bnt admission to the galleries was at first allowed only on the presentation of a ticket obtained by writing, and the visitors were personally con-ducted round the cases and shown the exhibits. The present number of visitors averages ahout 1,000,000 a year. Most M. are now opened on Sundays, at least between certain hours, as well as on week-days. On the Continent there is often a small charge for admission but 12 in the continent there is often a small charge for admission but 12 in the continent there is often a small charge for admission but 12 in the continent there is often a small charge for admission but 12 in the continent there is often a small charge for admission but 12 in the continent there is often a small charge for admission but 12 in the continent the continent the chargo for admission, but it is un-usual in Great Britain at the present day. The importance of M. for purposes of instruction has been recogposes of instruction has been recognised by educational authorities in the fact that properly conducted visits to the various M., under the supervision of qualified teachers, are allowed by the Board of Education to count as school-time. The treasures of the beautiful Victoria and Albert Museum S. Konsington for which Museum, S. Kensington (for which) handsome new hulldings have ro-cently been erected in the Brompton Road), were always intended for loan to other M. and schools of art when required, and this invaluable system of lending exhibits to other contres cakes of dung and earth. If properly for a time may come to be more uniprepared it lasts fit for use for five for a time may come to he more uni- prepared it lasts it for use for five versally adopted. Municipal M. are years, the fungus being in a white mostly controlled by the Museums thread-like form (mycelium). Except and Gymnaslums Act of 1891, and during a few weeks in autumn the tho Public Libraries Law Consolidat supply c'tion Act of 1892. The Museum Asso- of the d

l'organisation...dans les musées de la rough and ready distinctions of Ms. Grande Bretagne, 1895; Blardot, Les from other fungi; but the botanical musées d'Europe, 1860; Blanchet, features, though variable make

College of Surgeons, London, and of Rapport sur les musées . . . d'Europe, Glasgow University, and above all 1885-90; Babeau, Le Louvre . . . , 1895; the British Museum itself. Holland Cowtan, Memoirs of the Brit. Mus., 1885-90; Babeau, Le Louvre..., 1895; Cowtan, Memoirs of the Brit. Mus., 1871; Meyer on Museums of America and Europe, and at Dresden. in Abhandl. Zool. Mus., 1893, 1900-2 (Eng. translation issned by Smithsonian Inst., 1905); and annual reports of the world's chief M.

Museraya Sampul (1732... S0) on

ports of the world's chief M.

Musgrave, Samuel (1732-c. 80), an English classical scholar and physician. He wrote Exercitationes in Euripidem, 1762; Animadversiones in Sophoclem, 1800; Two Dissertations, on Greek Mythology, and on Newton's Objections to the Chronology of the Olympiads, 1782; and works on medical subjects; and helped edit Euripides (4 vols.), 1778. See Schweighaüser's ed. of Appiau; Gent. Musgrave, William (c. 1657-1721), an English physician and antiquary, studied at Oxford. He was secretary to the Royal Society (1685), and settled in Exeter (1691), practising as a physician. Ho wrote treatless on gout and medicine. His three anti-

gout and medicine. His three anti-quarian studies, Julii Vitalis Epita-phium (1711), Geta Britannicus (1716), and Belgium Britannicum, were re-issued as Antiquitates Britanno-Belgica (1719). Consult Wood's Athenæ Oxon. iv. (Bliss ed.); Munk's Coll. of Phys. i. (2nd ed.).

Mushroom (Agaricus psalliola campestris), a very variable British fungus, which has long been valued for its edible qualities, and has been cultivated from 'spawn' since the 17th century. The 'spawn' is obtained from rich old pastures where horses and cattle have heen feeding, and is made up with moderately dry

tion Act of 1892. The Museum Association was founded in England in
1889, and issued reports from 1890. If
the district the success of the President of
Museums Journal.

Consult Address of the President of
the Brit. Assoc., 1889; Flower, Essays
of modern methods of intensive culthe Brit. Assoc., 1899; Monroe in the
on Museums, 1896; Monroe in the
on Museums, 1896; Monroe in the
on Museums, 1896; Handbuch
der Archäologie der Kunst, by Miller
(1848), by Stark (1880): Prof. Jerons,
cultive The erop can be raised in the
open air, in frames, sheds, or cellars,
as well as natural caves, mines, or rulway tunnels, wherever an even temleading to the Museums, in
Methodsof Social Reform, 1882; Greenwood, Museums and Art-Galleries,
1888; Goode, Museumsofthe Future,
in Rep. Nat. Mus. for 1880, 1891;
line Rep. Nat. Mus. for 1880, 1891;
line Rep. Nat. Mus. for 1880, 1891;
line Rep. Nat. Mus. for 1880, 1891;
line Rep. Nat. The use of manure from horses
Murray, Museums; Their History and
Use. 1904; Benédite, Rapport sur long straw is essential. There are no
Porganisation description.

identification easily possible. young it is globose, expanding until nearly flat, and from 3 to 6 in. across. It is white, and the thick flesh turns brown when cut or broken. The stem is stout, with a ring or frill near the top; and the crowded gills turn from rosy to dark brown. It occurs natur-ally in rich, open ground, not under

trees. Music, although in its modern form the most artificial of the arts, is primarily the most universal and spontaneous. Evidence of its use as a medium of emotional expression is to be found in every direction, from the incantation of the savage or the intoned Greek play to mediæval church-music, the Romantic movement of last century, and the symphonic poem or music-drama of today. M. in some form is probably as ancient and universal as speech in the general acceptance of the Greek M. is the radix from whi-development must he traced. Greek M. was, doubtless, largely influenced by Chaldean and Egyptian, by Indian and Chinese, such as it was; and several early Christian chants were derived from Jewish synagogue-tuncs. But no deep study of such influences is possible, although it is surmised that ample material would have heen available if the Alexandrian library available if the Alexandrian library had been preserved. All Greek plays were sung, the modern counterpart of their tragedy being, of course, the music-drama, and of their comedy, the opera-houffe. The term M. was held by the Greeks to signify any art over which the nine Muses presided, and poetry and melody were compined in one art-form as a metter hined in one art-form as a matter of course (see Nietzsche's Birth of Tragedy, and various works by Wagner on Greek drama). Æschylus wrote the mclodies for his own tragedies, and even the Homeric epies were declaimed to the accompaniment of a lyre. With such paniment of a lyre. With such importance attaching to M. as a literary adjunct, although its possibilities as an absolute art were unsuspected, it was not long before some method of definite systematisation and notation of sound was sought. The three genera, with their modes were formulated (see their modes, were formulated HARMONY), and a code of notation by letters of the alphahet was constructed, three letters being given to each tone so that half and quarter tones could be recorded. Symbols of duration were also used, including the signs - and -, still in vogue for purposes of Latin verse-scansion and syllabification. The chief of the early methods of notation, however, was the system of neuma, but secular M. had also changed: crude this served only to remind the singer chants and folk-songs had given place

When | of the approximate difference in pitch of successive notes in a mclody he had already memorised, without expressing the exact intervals. It was not until the early 10th century that any definite progress in notation was made, although the literal code, in which Latin characters had superseded the Greek, had been developed, particularly in connection with instrumental M. Ahout the same time as Huchald (d. 930), whose system of writing words in the spaces of a staff, useful in vocal M., did not survive him, a red line was drawn horizontally across a page to represent F; and the immediate addition of a green or yellow line above and parallel to the red, to give the locus of C, made possible the precise expression of any interval up to an octave. The present type of staff was reached in the 11th sted usually of four number n_0

until the 16th century, when a four-line staff was restricted to plain song, five-line being used for other vocal M., and six-line for organ and virginal. Signs F, C, and G were also written to their relativo lines, thus originating the system of elefs. Bars, or staff-divisions, were introduced about this time to indicate accent; and within the next century, their use for rhythmic definition hecame general. Many of these improvements have been attributed to Guido d'Arezzo (d. c. 1050), but whatever he suggested, his actual accomplishments were not remarkable. By this time, aided by the progress in notation, M. had reached the stage of the 'descant,' or 'discantus HARMONY), from which the whole art of counterpoint was evolved, although the Greek practice of 'magadising' (i.e. singing in two parts, one an octave above the other) had been an attempt in the same direction. organum, in which a series of fifths organum, in which a series of litchs was added to a canto fermo, was the first step; from this two-part writing the three- or four-part 'rendel' or 'reta' (not to he confused with the later 'rende') was attained, the most famous example of this type being Sumer is icumen in (MS. c. 1225, British Museum, see article in Grove's Dict. of Mus.). a flowing four-part Dict. of Mus.), a flowing four-part over a brief two-part canon, probably the result of the fusion of a troubadour theme with church-music mode and counterpoint. These early polyphonic problems gave rise to a considerable principal e.g. Fran-de Morav

Johannes

to the heroic songs of the minstrels (q.u.) of the 10th and 11th centuries. During the 12th century the Tronbach in 1637 the first opera house was dours and Trouvères in France, and the Minnesinger and Meistersinger in Germany became prominent; manyol Carissimi (d. 1674) and Stradella (d. 1681) them were of high rank, e.g. Count 1881). Opera flourished also in Naples William of Poitiers (d. 1127), and and Rome, under Alessandro Sear-lácie (d. 1287), Hehrrich von Meissen (d. 1818), and the immortal Hans (Sachs (d. 1576). The historical importance of these classes and their influence on poetry and M. were enormous.

From the secular M. of the period sprang the true polyphonic schools which flourished during the 15th and 17th centuries. Apart from the valuable pioneer work of John Dunstable (d. 1463), Buichois (d. 1460), and Dufay (d. 1474), the first great result was the Netherland school, consisting chiefly of Jean d'Okeghem or Okenheim (d. 1495), and his famous pupils, Josquin des Prés (d. 1521) and Pierro de la Ruo (d. 1518), and Jacob Obrecht (d. 1505). The climax of the 16th-century Renalssance gave birth to the Venetian and Roman circles, the

Neinermanders, and Claudo Mermo (d. 1604); and (Roman) Jacob Arcadelt (d. 1560), and Danekerts (f. 1530-60), also a Netherlander. Although the prevailing influences in the Italian

of Giovanni Pierluigi da Palestrina (1526-94), although chiefly limited to church M., must be regarded as the highest expression of the ideals of his period; for, whilst revealing the same extreme contrapuntal skill, his works are more deeply sincere than the ingenious acrostics in which the Netherhanders were too prone to indulge, About this time a stimulus was also given to German church M. by the Lutheran Reformation, the most important composers being Martin Luther (d. 1546), Johann Walther Luther (d. 1546), Johann Walther (d. 1570), Franz Elers (d. 1590), and Orlandus de Lassus (1532-94), the Palestrina of Protestant M. English composers of the period were Tye (d. 1572) and Tallis (d. 1585), and later Morley (d. 1602), Byrd (d. 1623), and Gibbous (d. 1625), whose efforts lay chiefly in the direction of church M. and madrigals. By the 17th century such advances had been made in vocal and instrumental technique, in form and in chord experiment, that the conception of opera, which had been evolved from the incidental M. of the early miracle and morality to homophonic form and treatment,

oratorio was established by Giacomo Carissimi (d. 1674) and Stradella (d. 1681). Opera flourished also in Naples and Rome, under Alessandro Scarlati (d. 1724) and Stradella (d. 1681) respectively; in France, ballets and operas were produced by Cambert (d. 1677). Lully (d. 1687), and others; and song-plays became popular in Germany, the foremost composer being Schutz (d. 1672). In England, Henry Purcell (d. 1674) towered above his conference with some 1681). Opera flourished also in Naples above his contemporaries with some forty dramatic works. The beginning of the 18th century saw opera thoroughly established, the chief centres of activity being Venice and Hamburg. It was in the 18th century, too, that instrumental M. was given a status of importance, although a considerable quantity of organ, virginal, and violin M. had already been written. But the technical advances of the previous century had prepared the way for Johann Sebastian Bach (1685-1750), essentially an organist, but composer also of much excellent violin and clavier M., besides being a master of choral composition, almost wholly of a dovotional type. Bach not only represents the culminating point of the possibilities and ideals of polyphony; he is also the father of modern M., and it is from him that all subsequent dovelopments in the art of M. are to be traced (see appended diagram). Thanks largely to him, a whole new world of keyboard M. was opened up by the general acceptance of 'equal temperament' (see TEM-PERAMENT) which rendered possible a greatly extended variety of modulations. The exquisite sense of form and balance, the supreme technical mastery, and the great extent and variety of his M. made rapid progress inevitable; and in the matter of choral writing this progress was immediately realised by his contemporary, Handel (1685-1759), in whom the German and Italian tendencies were united. Handel's writing possessed both the lyric richness of the Venetians and the breadth and dignity of Bach, in opera and oratorio alike; and his mastery of big choral effects combined with the originality and richness of his harmony enabled obtain greater dramatic him to climaxes than had previously been realised. The new possibilities in instrumental M. that Bach had revealed were almost as promptly explored by Haydn (1732-1809) and Mozart (1756-91). Haydn was the control of the con actual turning-point from polyphonic

POSITIONS OF THE	Monteverdo (1567- 1643)	A. Scarlatti (1659- 1725)			Gluck (1714-87)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(Opera) Vober (1786-1826) Meyerbeer 1791- 1864)
DIAGRAM SHOWING THE CHIEF LINES OF DEVELOPMENT OF MODERN MUSIC AND THE RELATIVE POSITIONS OF THE POLYPHONIC (Opera)	(Church Music)————————————————————————————————————	Carissimi (1604-74) J.S. Bach (1685-1750)	CLASSICAL (Choyal)	Han	Inydn (1732-1809) establishing the so-called follows: [Index (1766-91) forms (c.g. the sonata and symphony), to supersedethe sonata and symphony (c.g. the singue)	Beethoven (1770 Footband) (Focal and Least 1827)	Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat Chorat C

Wagner (1813-83) It. St auss (b. 1861) (MInsic Drama)

Rossini (1792-1868) Vordi (1813-1901) Puccini (b. 1858)

Elgar (b. 1857) Bantoek (b. 1868)

Bantock (b. 1868)

Elgar (b. 1857) R. Strauss (b. 1864)

and with him the various 'classical' velopment from the 'lied' of Schuforms, e.g. the sonata and symphony, bert to its present perfection under assumed the structures whose prin-such composers as Granville Bantoek ciples have since predominated in nearly all musical development. And his experiments in chamber M., showing as they did the full value of the string quartet, led to the remodelling of the orchestra; a totally new tonal balance was effected by introducing new instruments (e.g. the clarinet, and later the cello), reducing the proportion of wood-wind, and banishing the harpsichord or clavier. For these reforms, Mozart must receive acknowledgment no less than Haydn. Judging by his experiments in harmony and 'colour,' and by the perfection to which he developed the new forms (including the concerto, which he n) it has been

it been for his ald have done (1770-1827)

much Beethoven's earliest M. may resemble Mozart's latest, his second and third period works, his sonatas, concertos, and chamber M., no loss the blook his wooderful expendence. than his wonderful symphonics and overtures, eover an infinitely greater range, and express more sheer genius than those of any other composer, save perhaps Wagner (1813-83). If Beethoven is the point of transition from 'classical' to 'romantic'—the terms are unsatisfactory, but have a generally accepted significance-in instrumental M., the same must be said of Schubert (1797-1828) in song, and of C. M. von Weber (1786-1826) in opera. The Romantic movement (o.v.) of the early 19th century was a general artistic reaction against 'academism' and formalistic narrowness, and was at first restricted to Paris, thon the centre of European culture—Hugo in literature, Delacroix in painting, and Berlioz (1803-69), Meyerbeer (1791-1864), and Chopin (1810-49) in M. Apart from chiopin (1910-49) in Al. Apart from the main body of Romantics, César Franck (1822-90) was working in a calmer and more devotional vein; his work must be credited as the progenitor of such modern M. as that of Debussy (b. 1862) and others scarcely less famous, V. d'indy, Charpentier, and Maurice Ravel. The rise of virtuosity gave a broader rawe for tuosity gave a broader range for in Ency. Brit., 1911, especially that Chopin, Schumann, and Liszt (1811- on 'Music,' with its exhaustive Chopin, Schumann, and Liszt (1811-86). In orohestral M., Liszt ovolved from the symphonic form of Beetfrom the sympnome torm of Beeti-hoven, the colour of Berlioz, and the ultra-Romantic Wagnerian ideals a new form, the 'Symphonic Poem.' This, with its offspring the 'Tone Poem,' has become the chief instra-mental form with Richard Strauss (b. 1864) and nearly all his contem-carries. The artsony over its deporaries. The art-song owes its de-

(b. 1868) chiefly to Schumann, Brahms (1833-97), and Hugo Wolf (1860-1903). Related to the Romantic movement are the nationalist movements, e.g. the Russian, with the composers Tchaikovski (1840 - 93), one of the greatest modern symphonists, Borodin, Glazounov, and Rimski-Korsakov; the Scandinavian, with Gricg, Schytte, Sibelius, and Sinding; and the Bohemian, with Smetana and Dvorák. The purer classic traditions were preserved in Brahms, greatest modern symphonist; but in his songs and chamber M. he shows the influence of the Romantics, particularly Schumann. In the same line of succession comes Elgar (b. 1857), who with Richard Strauss is not only one of the greatest living masters of the orchestra, but with Granville Bantock gives the highest expression of the tradition of massive choral writing that originated with Handel. The works of Elgar and Strauss are probably the extreme expression, as probably the extreme expression, as yet, of absolute M.; futurists, such as Schönberg and Scriabine, are still regarded with suspicion. The Romantio movement made possible the fullest reallsation of the operatic ideals ontlined by Glück (1714-87), and with Wagner the perfected musio drama was attained for the first time. A separate branch of opera, uniting Venctian tendencies with those of Weber, may be traced through Rosein (1792-1868) and minor com-Weber, may be traced through Rossini (1792-1868) and minor composers like Bellini and Donizetti to Verdi (1813-1901). The Italian and Wagnerian types find a mutual, if partial and imperfect, expression in the works of Puccini (b. 1858); whilst the actual Wagnerian tradition is being preserved by Strauss. Operas of additional translation to the contraction of the strategy of the stra of a distinctive type have been produced in France by Debussy and Charpentier amongst others; in Charpentier amongst others; in Russia, the ballet still usurps the operatic stage. See also articles on OPERA, SONG, HARMONY, ROMANTIC MOVEMENT, etc., and on the various composers.

Bibliography.—Grove's Dict. of Mus., 1904-8; Oxford Hist. of Mus., 1901-5; and Mr. D. F. Tovey's articles bibliography.

Music, Abbreviations in. In organ music, G.O. or Gr. = Great Organ. F.O. = Full Organ, ctc. In pianoforte music, L.H. or M.S. (It. mano sinistra) or M.G. (Fr. main gauche) = left hand; R.H. or M.D. (It. mano dextra, Fr. main droite) = right hand; ped. = depress pedal; * = release pedal General abbreviations are: 0. pause. Or abbreviations are: ", pnuse; < or

cres. = crescendo, get gradually louder; licensing anthority have an absolute > or dim. = diminuendo, get graduor dim.=atminuendo, get gradually softer; f=loud; ff=very loud; mf=fairly loud; p=soft; pp=very soft; mp=fairly soft. D.C.=repeat from the beginning of the movement (da capo); D.S. or :S., dal sepno=repeat from previous sign :S:; ten., or tenuto=bold, or sustain; sf. or sfz.=sforando, or sforato, accentuate; rit.=ritenuto, slacken immediately in speed: roll=rallentando slacken speed; rall. = rallentando, slacken gradually in speed; accel. = accelerando, quicken gradually; and so on. In full scores, the instruments are named in abbreviation, e.g. Fl. = flauto or flute, Fag. = fagotto, or Vo. = violin, Va. = Viola, etc. Viol.

Musical Box, an instrument for pro-ducing music by mechanical means. It was invented in the middle of the 18th century by the Swiss, who fitted minute plugs on a metal cylinder so arranged that they would strike separate bars of steel and set them vibrating, and so produce different tones. The M. B., however, is being gradually superseded by the piano-

player and the gramophone.

Musical Glasses were a set of glasses of equal size, forming a musical instrument; they contained varying quantities of water, the height of the water in any particular glass determining its note. The method of playing was by rubbing the moistened finger round the rim of the glasses. They are first mentioned in 1651, and were are inst inentioned in 1631, and were very popular in the 18th century, being played in London by Glück in 1746, whilst Mozart and Beethoven wrote music for them. As improved by Franklin in 1760, M. G. were often called a thermories? called a 'harmonica.'

Music and Dancing Licences. Within the Metropolitan Police district (i.e. within 20 m. of the cities of London and Westminster, or in Middlesex), every house, room, garden, or other place used for music or dancing must be licensed for that purpose by the county council or county borough council within whose jurisdiction the place is situated. Elsewhere, licences are required only in those towns where section 51 of the Public Health Act, 1890, has been adopted, in which cases the licences are granted by the magistrate. The mere occasional use of a room for music and dancing, or a temporary use for dancing on the occasion of a festival, docs not, but a skating rink where music is played does require a licence. The decided cases show that to require a licence as show that to require a licence in the remaining habitual about the use of the place for public music or dancing, though using the place once a month only would proplace on the potst rained on wire frames or in banging baskcts.

Musk Deer (Moschus moschiferus), the interesting native of the moundary of the moundary of the moundary of the moundary of the potst rained on wire frames or in banging baskcts.

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Music Halls. The 'music hall, or 'variety theatre' is a development of the 'saloon theatres,' which existed in London in 1830-40. These were attached to taverns, and were very popular amongst the middle and lower classes who liked to mix their dramatic amusements with smoking and light refreshments. They gave dramatic performances as well as variety entertainments, but were restricted by the 'patent rights' which were ultimately abolished by a number of distinguished literary men, among whom were Charles Dickens, Sir Edward Bulwer-Lytton, and Sir Thomas Noon Talfourd. After this the saloons gradually improved in character, and the M. H. of to-day began to appear, the first being the Canterbury, which under the direc-tion of Charles Morton cultivated the best class music; indeed, 'An Operatic Selection' of Goundd's Faust was first performed in England here. first performed in England here. Morton also opened the Oxford, and other halls soon followed, their popularity being assured by the cheap prices and physical comforts which they afforded. But the advance in the M. H. excited the icalousy of the theatre, and matters came to a crisis in 1865 when an ambitious ballet was produced at the Alhambra recently founded in Leicester Square. The Alhambra was prosceuted for in-Alliambra was prosecuted for in-fringing the Stage-play Act, and a long, unsatisfactory trial followed, with the result that the matter was taken up by parliament, and the M. H. were granted the privilege of producing ballets, vaudevilles, panto-mines, and other light pieces. Since then the character of the M. H. has still further improved and its prostill further improved, and its progress continues to be rapid. In London alone the capital invested these enterprises amounts £5,000,000, and about 80,000 people are employed, and 25,000,000 enter-The Alhambra, The Coliseum, The Empire, The London Hippodrome, The Pavilion, The Palladium, and The Tivoli.

Musk (Mimulus moschatus), small perennial plant of the order Scropbulariacee, with hairy leaves and bright yellow flowers. Some fine and oright years where the borticultural varieties have been introduced. These are best grown in pots trained on wire frames or in banging baskets.

Musk Deer (Moschus moschiferus),

decr. 20 in. in height, with large cars. long legs, and eoarse, goat-like hair, lightor colour. It is of special interest to zoologists in that it possesses certain intermediate characters between the antelopes and the deer, and it is now placed in a special subfamily, Mosehine, of the order Cervide. It is unique among deer in possessing a gall bladder, which is found in most of the antelopes. Antlers and horns are absent in both sexes, but, like the Muntjac, the male has the upper canine touth developed into projecting tusks 3 in, or more long. It is a solitary animal, feeding on leaves and flowers of forest shrubs. abnormally hardy and sure-footed on the most dangerous ground, being much assisted by the specialised de-velopment of the hoofs. Musk occurs as a resinous substance in a gland on tho abdomen of the male, and tho animals are mercilessly persecuted by hunters. The odour is probably the most penetrating and powerful in nature, and is said to cause homorrhago in th the gland,

and mouth for exportation, are known as ' pods.' When they reach Europe they are also give rise to the odour. commonly found to be heavily Muskhogeans, or Cree commonly

adulterated.

Muskegon, a city of Michigan, U.S.A., and cap. of co. of same name, on the Muskegon R., 38 m. N.W. of Grand Rapids. Has foundries, paper-mills, and machine-shops, and manu-factures planos, boats, furniture, steam-engines, boilers, refrigerators, ctc. Pop. (1910) 24,062.

Musket, see FIREARMS.

Musketry, a military term applied to that branch of work which doals with the theory and practice and regulations concerning small arms: the rifle, carbine, and revolver, and machine guns. The duties in regard to M., from efficiency of the com-mand down to inspection and care of arms, returns of ammunition, etc., arc assigned to the various officers. The training in the use of weapons is graded from recruit drill, through refineries, oil and flour mills, etc. various range and field practices, to Pop. (1910) 25,278.

small animal about the size of a roc- squadron practice, and deals with the tactical use of small-arms. A modern development has been the introducwhich varies from a pale grey to a tion of miniature range firing with dark brown, spotted with tints of a the use of the Morris tube. the use of the Morris tube.

> commissioned officers to act as instructors. Qualification at the school is necessary for sergeants or lance-sergeants before ranking as sergeantinstructors. There is a commandant in charge, with a chief instructor, an experimental officer, a Royal Engineer officer, two instructors, four assistant instructors, quarter-master, and medical officer. The business of and medical officer. The business of the school is also to improve the science of musketry in all branches, to experiment, and to keep abreast of all foreign weapons and methods; and includes all designs, ote., for equip-ment of ranges. There are schools at Blocmfontein, Orange River Colony: and in India.

> Musk Glands. The chief source of the musk of commerce is the male Musk deer (Moschus moschiferus) of Central Asia (q,v.). A number of rodents (e.g. the Musk rat), and at

Muskhogeans, or Creeks, American Indian stock, whose name is derived from Muskogee, the princiis derived from Muskogee, the principal tribo of the Creek confederacy. Their territory originally comprised the greater part of the Gulf states E. of Mississippi, extending N. to the Tonnessee R. The history of the stock, which includes the Choctaws, Chickasaws, Seminoles, and others, begins in 1527, whon the Spaniards landed for the first time on the Gulf coast. Most of the surviving members coast. Most of the surviving members are settled on reservations in Indian territory. See Jour, Antiquilies of the Southern Indians.

Muskogee, a city, the co. scat of Muskogee co., Oklahoma, U.S.A., 130 m. E.N.E. of Oklahoma City. It is the centre of an agricultural and stock-raising region, and yields

but less amounts. very varied, being th of range practice towa: ments of M. in actu includes company,

Musk Ox, or Musk Sheep (Ovibos he brgan the maunfacture of chemical moschalus), an animal which as the products for commercial purposes, generic name implies, has features in common with the sheep and the ox. It is about the size of domestic cattle, and is covered with a dense coat of very loug brown hair. The horns of the bulls meet in the middle line of the forchead. The legs are short, but the fect have a large spread, with a footprint much like a reindeer's, and the auimals are capable of some speed. They are social in habit, and are now confined to Arcic America, though, at a remote period, they have had a very extensive range, which in-cluded Britain. At some seasous of the year they exhale a strong odour of musk, and this pervades the flesh, although it is well flavoured.

Musk Plants. The odour of musk occurs in a number of plants besides the common musk. The musk mallow (Malva moschata) cinits the odour when rubbed, cspecially in The musk stork's bill weather. (Erodium moschatum) smells strongly of it if handled; but the mosehatel (Adoxa moschatellina) diffuses it from all parts of the plant except when bruised. The musk thistle (Cardinus nutans) has a powerful musky scent. The musk orchis (Herminium monor-chis) smells like musk at night. A melon (Cucurbita moschata), the musk rose, and the musk tree (Eurybia argophylla) are among many other plants, etc., which give rise to the odour.

Musk Rat, a name given to a number of rodents, and also to one inwhich diffuse a musky sectivoro, odour. It most commonly indicates the Musquash (Fiber zibelhicus). It is specialised for an aquatic life, the toes being webbed, and the long, almost naked tail being scaly and flattened laterally. Though inclined to be omnivorous, it is chiefly vegetarian, and stores up food for the winter by plastering it with mud into curious structures like haycocks. musk is secreted by both sexes in a large gland in the groin.

Muslin, a fine cotton cloth, said to have been first made at Mosul, n city of Mesopotamia. It resembles gauze in appearance, except that it is woven plain without any twisting of the warp threads on the west. Some very fine specimens have been produced in India, the Arni M. of the Madras presidency, and the Dacca M., made at Dacca, in Bengal, being especially famous. The material is now made in Europe, and numerous varieties are produced. It is used for dresses, curtains, blinds, cushion-covers, etc.

Muspratt, James (1793-1886), British manufacturing chemist, was horn at Dublin. After a stormy youth, has extensive market-gardens, and

products for commercial purposes, which occupied him until his retirement iu 1857. The reduction of the salt tax in 1823 enabled him to make alkali from common salt by the His works wero Leblanc process. situated in Liverpool, Widnes, Flint, and (from 1830-50) Newton. His son. James Sheridan M. (1821-71), was also a distinguished chemist.

Musquash, see Musk Rat. Mussænda, a genus of evergreen shrubs or herbaceous plants (order Rubiaccæ) bearing corymbs of red or yellow flowers. M. crythrophylla has crimson bracts. Some species have

medicinal value.

Mussafia, Adolf (1835 - 1905), a Romance philologist, boru nt Spalato in Dalmatia. From 1855 he was professor of Italian, and from 1860 professor of Romance at the university of Vienna. His best work was done in the early Italian dialects, although no department of Romance philology was nnexplored by him. M. A. may be regarded as one of the founders of the serious study of the Italian dialects. Many of the publications of Adolf ap-peared in the Transactions of the Vienna Academy. Musschenbroek, Pieter van (1692-

1761), a Dutch natural philosopher, born at Leyden. After practising as a doctor for four years, in 1719 he was appointed professor of mathematics and philosophy at Duisburg. His works include: Institutiones Physica, 1748; Compondium Physicæ Experi-mentalis, 1762; Introductio ad Philo-sophian Naturalem, 1726; Physicæ Experimentales et Geometricæ Dis-

sertationes, 1729.

Mussel, a name for various forms of molluse, but most commonly applied to the numerous widely distributed Mytilidæ. The common M. (Mytilus edulis), which forms the wedge-shaped shell, is very abundant in British estuaries. While young, the Ms. are capable of moving about with the aid of the small brown foot, but the and of the small brown foot, but later they attach themselves to rocks and to one another by spinning a bundle of tough threads (byssus). Though they are even more liable than oysters to pollution, they are important articles of diet in many districts, but they are utilised in greater numbers as bait in deep sea fisheries. The fresh vector Ma The fresh - water Ms. fisherics. (Unionidæ) are also numerous and widely distributed. The pearl M. occurs chiefly in Scottish rivers.

Musselburgh, a tu. and parl. burgh of Midlothiau, Scotland, on the Firth of Forth, at the month of the Esk, 51 m. E. of Edinburgh, of which it has become practically a suburb. M.

manufs. nets, twine, hrieks, tiles, Spoelberch de Loverjoul's La Véritable pottery, etc. There are also paper- Histoire d'Elle et Lui, 1897. mills, breweries, tanneries, and saltworks. The town is celebrated for its golf links. Together with Leith and Portobello, M. forms the Leith burghs, and returns one member to parliament. Pop. (1911) 15,938.

Musset, Louis Charles Alfred de (1810-57), a French poet, novelist, and playwright, born in Paris. In 1829 he met with great success, and at the same time with much hostile the same time with much nostne eritieism, through his publication of Contes d'Espagne et d'Italic. In 1830 his piece, La Nuit Vénitienne, was produced at the Odéon by Harel, but was not well received. In 1832 he left the Cénacle, and in the following year published Un Speciacle dans un Fautcuil, which was in so far successful that he was asked to contribute to tho Revue de deux Mondes. For this he

was his famous poem, Rolla, written at the beginning of his liaison with George Sand, whom he had met in the summer of 1833. In December of that year he left with her for Italy, and returned alone shortly afterwards broken in health and in spirit. worst sido of his moral eharaeter was brought out hy his sufferings. George Sand gave her account of the catastrophe in a novel, Elle et Lui, to which De Musset's hrother, Paul, replied in his Lui et Elle. His troubles did not prevent De M. from continuing to writo. In 1835 he produced Lucic, Le Chandelier, La Loi sur la Presse, La Nuit de Décembre, and, moro important, Confession d'un Enfant du Siècle, which is of great interest in revealing the poet's complex charaeter. In 1838 he was appointed librarian of the Home Office, and two worst sido of his moral character was librarian of the Home Office, and two years later his health began to give way. Meanwhile he had written Nuit d'août, Lettre à Lamartine, the comedy a dom, Lettre a Lamarine, the comedy Il ne faul jurer de rien (1836), Un Caprice, and some of the Nouvelle (1837), and the fragment Le Poète déchu (1889). In 1840 he wrote A trente ans, and in the following year the spirited poom Le Rhin allemand. the spirited poom Le Rhin allemand. His latter years were comparatively unproductive, his works including II faut qu'une Porte soit ouverte ou fermée (1845). Bettine (1849), and Casmosine (1851). He was elected to the Académic in 1852, and died of heart disease five years later. His biography was written by Paul do M. A complete edition of his works (in 10 vols.) was published by Lemerre in 1876. See studies by C. F. Oliphant. 1876. See studies by C. F. Oliphant, 1890; Arvède Barine (Mme. Vincens), 1893; Correspondance de George Sand Muttra, or Muthura, the name of a et d'Alfred de Musset, 1904; and dist. and tn. of the United Provinces,

Mussooree, a tr. and sanatorium of the United Provinces, British India, 130 m. N.N.W. of Rampur, With Landaur, which adjoins it, it

forms a convalescent station for European troeps. Pop. 5000.
Mustang, the wild horse of the Texas prairies. It is descended from early Spanish introductions, and is extraordinarily hardy and capable of immense labour when broken in.

Mustard. Tho two Ms. of importance are black, brown, or red M. (Brassica or Sinapis nigra) and white M. (B. or S. alba). It is the former which is grown in Cambridgeshire and adjoining counties for the production of seeds, which are ground. and after removal of the dark-eoloured testas are used as a condiment or are converted into M. oil. The white M. seedlings are commonly used in salads, and for the purpose should ho sown three days after cress, with which it is usually eaten.

Muswellbrook, a tn. of co. Durham, New South Wales, 85 m. S. of Tam-

worth. Pop. 1700.
Mutiny, Indian, see India—History.
Mutiny Act. The first Mutiny Act,
that of 1689, made it possible to keep a standing army in time of peace, not only hy sanctioning its existence for the first time in England, but by providing for the punishment of mutiny and desertion with death and empowering the crown to commission courts-martial to deal with those offences in time of peace. Since 1689, parliament passed the Mutiny Act annually until 1881, when it was finally superseded and morged in the Arniy Act of that year, an Act which is also annually renewed. The Jacobite Rebellion of 1715 made it necessary to increase the stringency of the crown's disciplinary powers, and accordingly the Mutiny Act of 1712 authorised the crown to formulate Articles of War to regulate generally the forces in the United Kingdom in time of peace. Prior to that year, the erown could only issue such articles in times of war or rehelliou. Among other things, the later Mutiny Acts provided for the punishment by courts-martial of persons guilty of embezzling military or naval stores. Mutrah, Matrah, or Matarah, a scaport of Arabia on the Gulf of

Oman, forming a suburb of Muscat, with trade in dates and other fruits.

Pop. 14,000.

Mutterstadt, a com. and tn. of Bayaria, Germany, in the Rhino Palatinate, 6 m. S.W. of Maunhelm.

Pop. 5093.

India. The district has an area of dejected appearance. In many cases 1445 sq. m., and a pop. of 765,000. death has ensued from sudden as the town lies on the r. b. of the phyxia when the respiratory muscles Jumna, and is the centre of Hindu have been affected. There is no musdevotion. Pop. 60.000.

Muzaffargarh, a dist, of the Puniab. British India, covering an area of 3422 sq. m. Wheat, rice, pulse, and indigo are the chief crops, and large herds of camels graze upon the sandy Pop. about 405,656.

ehiof town bears the same name, and

lies on the r. b. of the Chenab, 20 m.

S.W. of Multan. Pop. 4000.

Muzaffarnagar, tho name of a dist.
and tn. of India, in the Meerut div.
of the Central Provinces. The district is irrigated by four canals, the chief crops being wheat, pulse, cotton, and sugar cane. Area, 1666 sq. m. Pop. 880,000. The town, 30 m. N. of manufs. blankets. Pon.

Meerut, 25,000.

Muzaffarpur, the name of a dist. and tn. of India in the Patna div. of Bengal. The district yields indigo, opium, and rice. Area 3035 sq. m. Pop. 2,750,000. The town, on tho to the Little Gandak R., is 37 m. N.E. of Patna. Pop. (mostly

Hindus) 46,000.

Muziano, Girolamo (1528-1792), an Italian painter, born at Aquafredda, and studied under Romanius. It was not until 1550, when he went to Rome, that he began to be noticed. His most famous work is 'The Resurreetion of Lazarus,' which was finally placed in the Quirinal Palace. Tho large fortune which ho left was used to aid in founding the Academy of St. Luke at Rome, where he died. Muztagh-Ata, the highest peak of

muztagn-Ata, the highest peak of the Kashrar Mts., part of the Pamirs (q.v.) in Turkestan. It is situated to the S. of Little Karakul Lake, in lat. 38° 20° N. and 75° 16° E., and rises to a height of about 25,700 ft. It is considered holy by the Kirghlz, and was partly ascended in 1894 by Svor Hadiy

Sven Hedin.

Mweru, sec Mœro, Lake.

Myasthenia Gravis, a disease affecting the muscular tissues, characterised by rapid fatigue on exertion; it may be local or widespread, and is nnaecompanied by pain, except that experienced in extreme fatigue. It is not difficult to recogniso when pronunced, showing itself generally in drooping and lassitude of the limbs and trunk; there is a drooping of tho cyclids, and a vacant appearance in the face due to the absence of musoular movements of expression; the interference with the muscles of the larynx and throat gives rise to in-distinct articulation of speech, and a general nasal sound, while difficulty is experienced in swallowing; tho jaws droop, and the whole head has a thoroughly explored, first by Schlie-

eular atropby, nor have any post mortem changes been observed; there is no specific remedy. Of late years the subject has engaged increasing attention, and it is evident that in the past it has escaped diagoosis: it is more widespread than was recognised: vory many cases being attributed to hysteria. The disease is usually hidden in its early stages, proceeds gradually, but with definite stages of marked intensity, and a large proportion of the cases end in death. It is, however, certainly rare. Its causes, no doubt, will be found rather in the nervous centres thau in the muscles

Tic of Rangoon. Pop. of tn. 5000. Area of dist. 3005 sq. m. Pop. 300,000. Mycene, one of the oldest eitics of

ancient Greece, was situated in a very strong position on the hill overlooking the northern extremity of the Argive plain. In 468 B.C. M. was dismantled by the people of its ancient enomy Argos, and was never rebuilt. In the time of Pausanias the ruins consisted of a great part of the walls, with 'the Lions. from above it. pes; the said t fountain called Perseia; and subterraneous buildings of Atreus and his sons.

The discoveries which have been made hero have greatly increased the knowledge of Greek art especially pottery. The museum at Atbens contains many specimens.

Mycenæan Civilisation. This general term was first applied to the pre-historic civilisation discovered at Mycenæ, Troy, and Tiryns by Heinrich Sehlicmann in 1876. Since then so much bas been discovered and laid bare by archeologists that the word Myccnean is now scarcely appropriate, for the main source of this civilisation apparently radiated from Crete, and therefore present the accepted name of 'Ægean civilisa-tion embraces more fully the breadth and de

sang c with

battles and heroic deeds which until the year 1870 had been merely myths and glorious legends. In that year Schlicmann set out to find the site of Troy, and to prove that Homer had some foundation for his historic poems. No site in the Troad can poems. No site in the Troa really be placed accurately Homer's Troy, but the re ruinous

o the Minoan

mann and continued after Schlie- citadel palace, with towers, galleries, mann's death by Dr. W. Dörpfeld, sleeping apartments, and living-rooms. are accepted as the original site of famous Ilium. Schliemann dug with faith and enthusiasm, but without the scientific skill of the modern archeologist. He reached his second stratum in 1873 and revealed a burnt city, with treasures of gold and silver and bronze that suddenly aroused the interest of all students of ancient history. This find assisted in proving that the Homerie legend of Troy was not founded only on myth, but that great and wonderful civilisation flourished at least 1500 years before the starting point of Greek history as given by Grote and others. Sehliemann next excavated Mycenæ. Here ho found a bronze age nn-Hellenic in character, and differing from that of Troy. His belief that the tomb of Agamemon lay within the gates of the eitadel caused him to dig a pit some 100 ft. sq., about 40 ft. from the great 'Lion gate'; stone slabs wero first unearthed, then a circular alter with steles carved in relief. Three feet below the altar lay the first of tho five shaft graves, hewn from the rock. The roofs had collapsed, and huried with the bodies beneath the débris was a remarkable treasure. head-bands, breast-pieces, silver, and bronze; sixty swords and daggers were found in one grave alone. Schllemann was convineed that these were the actual graves seen by Pausanias, containing Agamemnon and his household. Whether that is true or not we caunot prove; what was proved was the excellence of the metal work and other treasures, showing a highly advanced civilisation belonging to a wealtby prehistoric people. The beclive tombs were explored next, the largest being the well-known Treasury of Atrens; it was strongly built, with a passage leading to a high vaulted chamber shaped like a bec-The door to the chamber was 17 ft. high, bordered with columns carrying a cornice masked with red porphyry, with spiral decorations, enrielled with brouze and coloured marble ornaments; rieli decorations were visible everywhere showing a high excellence in art. A tomb not far from the treasury of Atreus that Schliemann explored and believed to be the grave of Clytennestra, showed beautiful designs in green tablecter and adverges members. coloured alabaster and marbles. From Mycenie he went to Orchomenos in Bœotia, and here other excavations showed the same rieb art and good Egyptian work laid

sleeping apartments, and living-rooms. A frieze of alabaster carved iu rosettes and inlaid with vivid blue paste was found, also excellent fresco painting. After Schliemann's death paiating. After Schliemann's death Dörpfeld and others continued his work. Mycenæ was still considered to be the chief home of this great culture until Crete was explored. Crete disclosed a period of civilisation belonging legitimately to the whole Ægcan, scareely less ancient than that of Egypt. The untiring work of Sir Arthur Evans has discovered for us ns of art and

excavations in Crete have been at Cnossus, Tylissus, and Hagia Triada (see CRETE). It was here that this Ægean eivilisation apparently found its fountain head. For the general evidence of this culture there are ruins of palaces, villas, houses, and beehive graves; the decorations and architectural are -- eolumns, features friezes, mouldings, various mural paiatings, and mosale inlay, etc. Vessels have been found, from tiny pots to hugo stone jars, and quantities of pottery. One of the general features of Mycenean pottery is the stirrup-cup or false-necked vase, so-ealled from the rings, pendants, daggers, and sword fact that the neck to which the hilts, also objects of ivory, amher, handles join is closed, or false, and silver, and bronze; sixty swords and another neck is fashioned farther away from the handles for conveni-ence in occur oecur whereve been brought , pical pottery

Late
Minoan III. (Créte). Many fragments
of Cretan pottery have been discovered in Egypt, and it seems probable that a considerable trade may have been earried on hetween the The two famous Vaphio countries. cups discovered in 1889 by Tsorentas were found in a bechive tomb; they were among many beautiful articles of gold, silver, bronze, erystal, etc. The cups were of gold, decorated in relief with seenes depicting the capture of bulls; they belong to the Late Minoan I. period, and represent a triumph of ancient art. Thrones and seats and tables in stone and terra-cotta have been found, objects of art in ivory and precious metals. Small sculptured works, but no large ones, jewollery of various kinds, weapons in metals, only a few later ones being of iron, engraved gems and gem impressions. Tombs of pit or dome-shaped stylo, paved road. ways with bridges and an oxecllent system of drainage, and, lastly, two main systems of script which as yet remain undeeiphered. What their religion was we do not yet know, it What their

in nature, rocks, pillars, trees, etc., and the symbol of the double axe. Apparently a goddess was worshipped, sacred. The dead were not burnt, but buried with great bonour, apparently with the hope of a future life; there was possibly a hero-cult of the dead. The social organisation as far as we can gather at present, indicates a considerable body of law, and a Tradition luxurious ruling class. asserts that Minos was a great lawgiver, and that he possessed a great navy which guarded his commerce with other countries. From the finds of Ægean pottery and various objects in other lands it would seem probable that they traded with Egypt and Northern Africa, with Sicily and Italy, and oven as far as Spain. The total duration of this great civilisation covers at the least 3000 years. Apparently with the use of iron the Ægean culture ended, about 1000 B.C. What people destroyed this great civilisation, or whence they came. wo have yet to prove, possibly the tribes known to Homer as the Dorians were the destroyers. If the scripts are ever deciphered, we may learn much; until then and until further discoveries are made we can only theorise.

Myconus, Mykonos, Miconi, or Mykoros, an island of the Grecian Arohipolago, one of the Cyclades in the Ægean Sea. 5 m. from Tinos. Area 40 sq. m. The tn. of M. is a scaport on the W. coast. Pop. 4690.

Myddelton, Sir Hugh, see MIDDLE-TON.

Mydriasis, an abnormal condition of the eye. The pupil is more or less permanently dilated or lacks to a large degree its power of accommodation when exposed to light of varying intensity. It is prevalent in certain diseases, and is also one of the effects of certain drives as held. effects of certain drugs, e.g. bella-donna and its derivatives.

Myelitis, inflammation of the spinal cord; osteomyelitis is inflammation of bone-marrow. If the grey matter of the spinal cord is affected, the discase Is called poliomyclitis; if the white matter, leucomyelitis. In acute M. the nervous tissue undergoes degenera-

tion, but may hardened and • connective tis

vary according to the seat of the goddess, and her worship had features Hyperesthesia, or excessive allied to that of Aphrodite and lesion. sensibility, is at first apparent about the level of the lesion; but later sensibility is numbed, and the parts below the lesion pass into paralysis. The progress of the chronic form is slow; little cau be done except to look after

points to a divinc principle, resident the comfort of the patient, and he may linger for years or be cut off by some intercurrent disease. The cause of M. may be injury or secondary into whom doves and serpents were flammation from meningitis. Many

cases present a syphilitie history.

Myers, Frederick William Henry (1843-1901), an English essayist, poet. and author, born at Keswick. He was appointed classical lecturer at Cambridge, and in 1872 a school inspector under the Education Department. After much inquiry and discussion, After much inquiry and discussion, M. was the leading spirit, with H. Sidgwick, R. Hodgson, R. Gurney, and F. Podmore, in founding the Society for Psychical Research in 1882. Phantasms of the Living, 1886, was the result of some of his labours in sifting and collating the proceedings of the society. His most considerable work in that sphere, however, was the postburgue Hange. ever, was the posthumous Human Personality and its survival of bodily death (2 vols. 1903), which, although incomplete and tentative, was the first attempt to connect the phenomena of hypnotism, mediumship, trances, hallucinations, etc., as be-longing to one and the same field of inquiry. The poetical works of M. are not remarkable, but his prose essays are delightful both in style and matter. His other works include: Catholic Thoughts, 1873; Essays Classical and Modern, 1883; Science and a Future Life, 1893, etc.
Mygale, a genus of spiders, the species of which latve their eyes

placed closely together at the anterior extremity of the thorax. They spin their webs in the form of tubes, in which they reside concealed in holes in the ground, or under stones, or the bark of trees.

or the bark of trees.

Myingyan, a dist, and th. of Upper
Burma, India, on the Irawadi, 36 m.
from Pagan. Lacquer ware is manufactured. Area of dist. 3139 sq. m.
Pop. (dist.) 360,000; (tn.) 17,000.

Myitkyina, the most nortberly dist.
of Upper Burma, India, Mandalay
div., 10,640 sq. m. in area. Indawgyi
Lake is in the S.W. The tn. is the
limit of navigation on the Irawadi.

limit of navigation on the Irawadi. Pop. 70,000.

Mylau, a tn. of Saxony, Germany 10 m. from Plauen, with an old castle.

tta was the uame of a goddess ylonian and Assyrian mythmentioned in Herodotus and She was a kind of nature

many country seats, etc., he also carried out many engineering pro- of arthropods which comprises the locts. He was a member of the Chilopoda or centipedes, and the academies of Florence and Bologna: a fellow of the Royal Society; and from 1766 to his death was the sur-

veyor to St. Paul's.

Mynster, Jacob Peder (1775-1854), a Danish bishop and theologian, born at Copenhagen. In 1834 he was appointed bishop of Zealand, and during the period in which he occupied this host he steadily opposed the movo-ment started by Grundtrig. Being unsuccessful in this, he gradually ceased the struggle and devoted himself to literature. His best kuown work is Thoughts on Christian Dogma (German translation, 1840).

Mynyddislwyn, a par. of Monmouth, Wales, 7 m. S.W. of Pontypool, with chemical works, collieries, and iron and tin plate works. Pop. (1911)

9982.

focussed

vision.

Myograph, an instrument for dotermining the effect of stimulus on muscular fibre. By a suitable arrangoment the movement of the fibre is transmitted by a needle to a blackened plate swinging on a pendulum. tuning-fork vibrating two to three hundred times per second traces on the same plate a time curve, whereby the duration of each phase of move-

ment is determined. Myopia, or Short-sight, a defect in vision due to a faulty structure of the oye. Parallel rays of light are brought to a foous in front of the retina owing to an excessive length of the ove or the surface of the cornea and the crystalline lens arc too convex. Thus an indistinct image is thrown on the rctina. by the use of being concave : lenses is adius ivs are

Myos-Hormos (modern Abu Sar Kibli), an ancient seaport of el-Kibli), an ancient Egypt on the Red Sea, almost opposite its bifurcation into the Gulf of Sncz and Akabah. It was once an emporium of the trade between Egypt and India.

dinary

Myosis, a condition of the eye in myosis, a contactor of the eye in which the pupil is abnormally contracted and lacks its power of accommodation. It may be produced by use of certain drugs, e.g. opium.

Myra, a ruined th. of the S. const of Lycia, Asia Minor, 62 m. S.W. of Adala, with interesting received.

Adalia, with interesting remains.

Myrcia. a genus of cvergreen shrubs and trees (order Myrtacee), bearing axillary peduncles of small white flowers, which are followed in some cases by edible fruits. M. amplexicaulis is a handsome shrub sometimes grown in the stovehouse. la

Myriopoda, or Myriapoda, the class Chilopoda or centipedes, and the des. The body or cylindrical rous, though, c

course, not so numerous as the popular names suggest. In their isternal anatomy they resemble the Insecta, with which they have such other features in common as respiration by tracheal tubes and the possession of two antennæ on the head, but the segmented body exhibits no distinction between the thorax and the abdomen, while wings are always absent. Their range is very extensive. and they live in dark places, as under stones, heaps of leaves, masonry, and Some posses the bark of trees. Spowers of luminosity. The centipedes are always flattened and are characterised by a single pair of legs to each segment, the first pair are inflicting poisonous of wounds: they are all carnivorous. Millipedes live on vegetation, and apparently have two pairs of leg-attached to each segment, but the segments are not perfectly separated:

the bodles are round. according to Myrmidonos were, Greek legend, an Achean race which inhabited Phthiotis in Thessalt. from an namo is derived Their ancestor, the son of Eurymedusa by Zeus, in the form of an ant, or from the legend of the repeopling of Egina with ants, changed by Zeus into men. In English, a M. is used for a ruthless subordinate. See Ried, if 68.5 Change and 100.000.

ii., 68; Strabo, viii., 375, ix., 433.
Myrobalan Plum, or Prums cerasifera, a hardy shrub or tree of exceptionally quick growth, much employed as a hedge plant. Its rellowing shed fruits are very delicately flavoured, but are rarely produced, as the bloom appears in Fobruary or March, and, unless protection can be given, frosts prevent the fruit setting.

Myron, a Greek sculptor of the 5th century B.C., born at Eleuthere, on the borders of Bosotla and Atlication He worked almost exclusively in worked atmost exclusives bronzo, and was a late contemporary of Pheidias, as he made statues of the athletes Timanthes (466) and Lycinus (448). There is a cast of a Lycinus (448). There is a cast of a the work of the work of the the late of the lycinus of the work of the lycinus of the lyci the wrong way in the British Museum.

Myronides, an Athonian general of the 5th century B.c. In 459 he repulsed two Corinthian attacks on Megara, and by the victory of Epophysta (452) over Œnophyta (456 B.C.) Spartans he obtained the submission of Bœotia (save Thebes), Phocis, and

Locris. Myrrhis, Myrrh, or Sweet Cicely, small genus of umbelliferous aves and umbels of white flowers, British, and was formerly much

ed as a pot herb and in salads.

Myrtle, or Myrtus, a genus of rubs or trees with white fragrant flowers and ornamental aves, which are also fragrant. The mmon M. (M. communis) and its amerous varieties are hardy in mild eltered positions. Its leaves aro stilled to yield the perfume Eau

opled by the Mysi, who were oly akin to tho Nybians ılled

ergamum and Cyzicus.

Mysore: 1. A native st the founder of India, surrounded by the Presidency except in the N.W., European mystic. Then came the whore it is bordered by that of Christian mystics of the middle ages, Bombay. It is divided into two leaded by S. Bombay. It is divided into two egions—the Malnad, or hill country, n the W., i.e. the country bordering m the Western Ghats, and the Maidan, or open country, occupying ho greater part of the surface. Chief rivers are the Kistna, Cauvery, and the Pennar, all unnavigable, and only useful for irrigation purposes. M. suffers less from famino (except 1876-17) than any other internal tract of The chief products include silk, coffee, sandalwood, gold, and vory, but rice, oilseeds, sugar caue, otton, cocoanut palms, and all sorts of grain (especially 'ragi') are cultivated. Area 29,433 sq. m. Pop. 5,806,300 (chiefly Hindus). 2. Cap. ted. Area 29,433 sq. m. Pop. 306,300 (chiefly Hindus). 2. Cap. tho above state, situated 10 m. S.W. of Seringapatam. It contains the old palace of the maharaja, an example of Hindu architecture, partly destroyed by fire in 1877. Government house was originally bullt by Wellesley (Dnko of Welling-

Mystagogue (Gk. who initiates into

ton). Pop. 67,500.

person who in the system supervised to those seeking initiation, and gave R. Nicholson, Mysticism in Islam; instruction as to the ceremonial to Evelyn Underhill, Mysticism and

be carried through.

Mysticism, a belief in spiritual apprehensions of truths beyond the mala, Quietism, Rosicrucianism, anderstanding, can hardly be said Theosophy, and the articles on the to be either a philosophy or a various religious and on the persons doctrine. It may be said to be a tendency in religious feeling. in religious feeling, a Mytens (or meyens), and atmosphere. The 1656), a Dutch portrait painter, born tendency temper, or an atmosphero.

rennial plants. M. odorata, a tall, slarting point in M., and its goal, is omatle plant with large tri-pinnate that unity underlies diversity. So M. has been defined as an 'attitude of mind founded upon an intultive or experienced conviction of unity, of oneness, of alikeness in all things.' M. leads to a belief that all things are manifestations of the divino life and that the spirit is the only eternal thing, and, further, since unity underlles all, theu man has some share of the nature of God, and through this Godlike part of bim can apprehend God; for as through the intellect we Mysia, in ancient geography, was apprehend material things, so through district in the N.W. of Asla Minor, the soul can we apprehend the iot a part of ve can only

arians. The northern portion by being it, ulled Mysia Minor, the sou rmystic is to ysla Major. The chief towns were attain union with the divine, and life becomes one long aspiration, and Myslowitz, a tn. of Silesia prov., Poeomes one long aspiration, and reality or truth ever and ever deepens russia, on the frontier of Poland, and oxpands. So M. depends upon 116 m. S.E. of Breslau. There are feeling. M. appears in Buddhism, the works, flax-spinning mil feeling. M. appears in Buddhism, to said to have to all nines near. Pop. 17,838.

Syrian monk

to Dionyslus the great Iris

Erigena, who translated Dionysius into Latin from the Greek. In the 12th and 13th centuries may be mentioned Bernard of Clairvaux, Richard of St. Victor, near Paris, and Bonaventura. In the 14th century, Richard Rolle, Walter Hilton, and Julian of Norwich, John of Chur, and Thomas à Kempis. Later we find Paracelsus, Bruno, Campanella. Bochme, Schelling, and Swedenborg. In England we have the Cambridge Platonists, including Henry More and John Smith, and later William Law, Blake, and Coventry Patnore. Among more recent writers it is only y to mention Burke, Wordsworth, Shelley, Rossetti, the Brownings, nccessary Colerldge, Keats, Meredith, and Francis George Thompson. To-day among the most prominent are W. B. Yeats and Property of the control of the con

See C. F. E. n in English Musticism ige, Christian Mysticism of English Mystics;

The Myslic Way, and other works by the samo authoress. See also CAB-

Mytens (or Meytens), Daniel (1590-

at the Hague, and came to England | was but a disease of language, and and became portrait painter to Charles I. When Van Dyck was made the king's principal portrait painter M. wished to go, but was prevailed upon when to stay by the king until about 1630, when he returned to Holland. He painted portraits of many notable persons, including Charles I., the persons, including Charles I., the Duke of Portland, the Earl of Craven,

Mytho, or Mito, a port of Frer Indo China at the mouth of Mekong R., 58 m. S.S.W. of Saig Pop. 23,000.

Mytbollmroyd, a tn. of the W. Riding of Yorkshire, England, on the Calder, 5 m. W. of Halifax. Cotton spinning and weaving are carried on. Pop. (1911) 4152.

Mythology, that division of tradi-tion which deals with the acts and deeds of gods and other supernatural beings. It is not, as generally seems to be supposed, necessarily confined to an early state of society, for, in the shape of folk-lore it still permeates our customs to a surprising degree. One of the first questions which occurred to thinking men when the general restlessness of the ancient world was past, and humanity found time for the repose of study, was, Whence came the gods, and how are the tales concerning them to be ex-plained? That great question is still in process of being answered, and although the study of M. has by means of analogy and the comparison of the myths of many peoples been reduced to what might almost be called an exact science, it cannot be pretended that many of its most salient ques-tions have been suitably replied to. Early efforts to answer the question as to the genesis of the gods led to the formation of many various theories. Thus we find them regarded as the expression of natural phenomena, as the sun, moon, and wind personified. Various myths depict the sunrise and sunset, others the spring florescence and the approach of the colder season. Among the most acute of these early investigators was Euhemerus of Thessaly, who advanced the doetrine that the gods were in reality early heroes exalted as divinities. Thus in his

Rome had been made before the last M. proper, it need not be pursued here. quarter of the 19th century, but it These three systems or root-beliefs was at this period that serious was at this period that serious tion began to be paid to the parison and elucidation of the store of mythic stories.

that the names of divinities were referable to words expressing natural phenomena. Moreover, he proved to some extent the philological connec-tion between the names of many Hindu deities and those of Greece, Rome, and even of the Celts and Teutons. A new school arose with Lang and Fraser, both of whom interpreted M. in terms of savage life
They exhibited the which exists be-

concepts of living savage peoples and those of Greece and Rome, and proved that all Ms. have their foundation in similar and unchanging conceptions. The careful student of M. will find it to his advantage to study on the lines of no one system, but to employ all within reason. One of the first essentials in the study of comparative religion is the possession and unremitting exercise of an abounding common sense, in order that unlikely theories may be rejected, and that examples and comparisons may be regarded in their true light without any fear of mis-

which he is himself endowed. Thus in rivers, trees, heavenly bodies, and other objects which possess more or less the power of movement, he sees beings gifted with life. There are whisperings in the winds, the rivers prophesy as did the Peruvian Rimae, the trees are the prisons of powerful enchanters, who moan from the place of their confinmeent. The entire universe, then, is a spirit-peopled one. This belief i to it is fet Portuguese

of peculiar shape, the possession of which will benefit the savage. A further primitive belief which is found at the roots of all Ms. is thet of totemism (q.v.). A totem is an animal or bird or plant which is regarded by exalted as divinities. Thus in his or bird or plant when is regarded a cestimation M. was but a disease of a family or trihe as its original anhistory, in which ancient kings and cestor, with which it has blood-kinship. This belief exercises a powerful effect upon savage custom, especially as regards kinship and marriage. But as this question has little bearing on

> which inhabit hich are supıl phenomena,

attempted to show that in reality M. levolve from the animistic form into

may ovolve into a local god. most totems succeed in achieving godhead after several generations of tribal adoration. In the latter class we can descry the animal-headed gods of Egypt and Assyrla, while animism supplies us with examples of water and sea-gods, thunder-gods, and all the pantheon.

Classification of deities.—The deities of various Ms. fall into several welldefined classes. Thus in all systems we have war-gods, water-gods, windgods, thunder and lightning-gods. gods of agriculture and the chase, gods of death, and many other mythic conceptions. Many of the deities of certain systems combine two or more Thus, of the attributes of godhead. it is common to find war-gods who are also gods of agriculture, and wind-gods or thunder-gods who are gods of the chase. Detties of death quite often preside over agriculture, as it is imagined that the seed arises their subterranean domain. When mankind partially abandoned the hunter state and entered upon a semi-agricultural condition of life, a new type of mythical beings arose. With these, man had an implied contract to the effect that he should provide the gods with sacrifice in return for their superintendence of the crops and fruits of the earth. Unless man sacrificed to these gods they would withdraw their support and he would perish. This reverence to a newly-acquired pantheon would to a certain extent be instrumental in bringing about the partial neglect of the older totemic and animistic Man dld not dwell in such close touch with the gods of the soil as he had done with the older gods of the totem period, so that the former dwelling more aloof from him, had a much better chance the true attributes of

guidance in the hunt fetish was usually employed, but the health of the crops, and therefore the sustenance of the community, depended upon unseen beings who sent the rain, the wind, the thunder, and the lightning.

Cosmology.—An important department of myth is that which deals with the primitive conception of the world and its creation, and the origin of man. The likeness between cos-mological myths collected from all parts of the world is extraordinary, in that it cannot be accounted for by any theory of circulated or borrowed conceptions. We find in most of these the creative agency brooding over a vast world of waters and raising the solid earth from the flood beneath,

full-blown dcities. Thus, too, a fetish either by a process of strenuous which gains more than personal fame thought or by physical toil. In other instances the universe is hatched from a cosmic egg. Man often passes through evolutionary types, several of which are discarded by the gods until they arrive at human perfection. Behind these we usually descry some dim creative figure, but ofttimes the universe is the work of a combined pantheon.

In the space left at our disposal we shali attempt a brief résumé dealing with the principal characteristics of the world's most important Ms.

Greece and Rome.—The Ms. of these peoples may be considered together, as in many instances their doities are directly interchangeable. We discover in them a well-defined pantheon ruled over by the great god of the sky, Zeus or Jupiter, who has sup-planted a still older generation of divine beings. With his wife, Hera or Juno, he rules over a divine galaxy, many of the members of which are related to him. Hephæstus or Vulcan, his son, wields the thunder and lightning, and is the craftsman or artificer of the gods. Pallas Athene or Minerva, presides over wisdom, but at the same time has something of a martial character as a sort of divine amazon. Ares or Mars is the god of war. Aphrodite or Venus presides over love, and Mercury acts as divine messenger between gods and men. Apollo is the god of song and art. In-numerable tales circle around these beings, tales which for beauty of conception and completeness of finish have never been equalled in the history of myth. But the Greek mind speedily discerned the unsubstantial nature of the shadowy system it bad itself evolved, and we find very early doubts expressed concerning the real existence of the gods. Probably no mythological system attained such a perfection, or underwent collapse as that of Hellas.

Rome, built by a sterner and more conservative folk, beld its own for a little longer, buttressed as it was by the power of an upbolding state, but it, too, crumbled speedily before the encroachments of monotheism.

Egyptian mythology.—In Egyptian M. we find ovidence that the faiths of the lower cultus, totemism, animism, and the like, although still permitted to exist, had superimposed upon them the philosophical beliefs of a priestly class which had arrived at a high state of theological capacity. Recognising the folly of communicating abstract beliefs to the ignorant, the priestly caste retained so much of the early popular beliefs as seemed good to it, and employed them symbolicspeaks of the apcs and other animals kept in captivity by the Egyptian priests, but he is careful to explain that these wero in no wise regarded as idols, but as typifing the multifarious attributes of deity. However, the totemic system had obtained too strong a hold upon Egyptian M. ever to be totally extirpated, and we may say that the various figures of the Egyptian pantheon were evolved either from naturalistic or totemic concepts. We find the gods of Egypt arranged in triads, or groups of three. Egypt was sub-divided into nomes or provinces, and each of these possessed its triad of gods. Thus Osiris, Isis, and Horns at one time presided over one of these localities, but later, because of their exceeding popularity, became the national gods. The myth of Osiris, his birth, reign, and death, typifies the daily journey of the sun. His wife, Isis, and their son, Horus, lost all their original characteristics when they were interwoven with the Osiris myth. Nophthys, sister to Isis, prohably represents the sunset. She was wife to Set, brother to Osiris, and god of darkness, who finally triumphed over his hrother. Wisdom was personified in the god Thoth, or as he was called by the Greeks, Hermes Trismegistos. Anubis, or Anpu, presided over the lower regions, and was the patron of embalming. He was figured with the head of a jackal. Pasht, or Buhastis, the cat-headed, represented the heat of the sun. Besides these principal deities a large number of the kings of Egypt were deified. An enormous and cumbrous ritualistic system had crystallised round this M., much of which is re-presented in the Book of the Coming Forth by Day, and deals with funerary practices. It is, in fact, a guide to the soul after death through the various divisions of Amenti, the sad underworld of the dead. Semitic mythology.—The Ms. of the

Mythology

various Semitie races possessed a common origin, but were more or less conceptions, from their relations influenced by the religions of sur-with whom many myths, scarcely inrounding peoples. In early Semitic ferior to those of Hellas, have arisen. M. we discover a polytheism having many of the features of totemism and animism ombedded in it. We also find a widely-distributed system of pillar-worship, and each 'high place' and mountain appears to have possessed its special deity or ba'al. In the Book of Genesis we find confirma tion of the polytheistic condition of the early Israclites, for whereas a deity, Jahvoh, is alluded to fre-

ally for the inculcation of higher re-imultiplicity. Obviously a later monoligious thought. Thus Herodotus theistic version has been combined with an older polytheistic one. The polytheism of the races surrounding Israel was merely a continuation of this old belief, and the monothcism of the Israelites arose in all probability from the great popularity of Jahveh, who had led them out of captivity into a happier sphere, who was a jealous god, and would brook no rivalry. The religions of Babylonia and Assyria were widely polytheistic, including as they did gods which represented every attribute and phase of deity. In Babylonian myth we find a great triad, Anu, En-lil, and Ea, who are at strife with darker deities. Apsu, Tiamat, and Marduk. The title Bel was bestowed on all gods alike as a generio one. Dagon was probably a corn deity. One of the principal Assyrian deities was Ashtaroth, or Astarte, the wife of Marduk and the goddess of love, and typical of fruitfulness. Ashur, from being the local god of the city of that name, rose to the position of chief of the Assyrian pantheon, and was chiefly famous as the national god of war. A host of smaller gods followed, the majority of whom had little more than a local

significance. mythology .- The mythic Hindu system of the Aryan conquerors of India is polytheistic. The head of their pantheon is Brahma, whose is oft-times, however, leadership threatened by other powerful gods. The fullest account of the Hindu M. is to be found in the Vedic hymns, literary fragments of the earliest Hindu age. Brahma is passive, but when he acts he is given another name, Vishnu the Preserver, a more 'human' deity than the impersonal Brahma. Siva is Brahma in his guise Varuna as a punisher and destroyer. is god of the waters, and Indra wields the storm and the lightning. Vishnu has had many avatars, or incarnations, as has Durga, Sive's wife, the dostroyer of demons. Innumerable inferior deitles cluster around these rclations with whom many myths, scarcely in-

Teutonic mythology.—Perhaps the most important of the European mythic systems is that of the ancient Teutons. At the head of their pantheon was Odin, or Wotan, the All-Inther, who presided over the destinies of both gods and men. He possessi

sun and typifies . housew.

quently, we find several netices of and the Scandlnavian Vulcan. Tyr beings called the Elohim, the plural was the sword-god and god of war, ending of whose name denotes their Loki was the mischlovous god of evil.

summer, whose myth death of that season. whose myth typified the The Scandinavian idea of the universe was that the aesir, or gods, dwelt at the top of the world-tree, Yggdrasil. Round this tree coiled the great world-snake. At its roots dwelt Hel, the dark goddess of death. In Midgard dwelt the race of men. But the Norse conception of deity did not admit that its character was everlasting. On the contrary, before the eyes of the gods there eyer loomed a dreadful day of doom, when after the battle of Regnarok, the powers of darkness and eyil would rule supreme, and the divine sway come to an end.

Celtic mythology.—The Celts France and Britain possessed a welldefined mythological system, parti-culsrs of which can be gleaned from the remains of altars and images in France and England, and the mythological tales of Wales and Ireland. The Celtio religion was strongly influenced by primitive elements totemic, animistio, and compatible and although later in elements,

the Celtio raco new prompted the evolut deities, those of growth were probably the mc Most of the divinities, tribal or local in charac

find that certain gods in the Irish and Welsh myths are regarded as preeminent, it must be remembered that in all probability they had attained that position through the importance of the tribe which worshipped them. In ancient Gaul we find Ogmlos equated by the Romans with Mcreury, and Borvo, Bellenos, Grannos, and more-all local gods-with Apollo. The martial character of the Gauls tended to the ovolution of many war-like deities, Camulos, Alhiorix, Csturix. Animal and nature gods also ahounded, as Mullo, a mule-god, Vintius, a wind-god. 'Corn-mothers' were numerous and local, as, for instance, the famous Berecyntia, of Autun. In the mythical tales of Ireland we meet with a number of supernatural races, such as the Fomorians, Firbolgs, and Tuatha Dé Danann, all of which probably represent the of which probably represent the several pantheons of various emigrant races. The most prominent Fomorians wero-Balor, a personlfication of the cvil-eye; Bres, probably the god of night, or perhaps of growth; and Domnan, a goddess of the depths of the earth. Of the Tuatha Dé Danann, which means 'the folk of the goddess Danu,' the principal deities are Dagda, the most important of all Irish gods, who is probably an earth or agricul- The symptoms observed are similar tural delty; Congus, son of Dagda, a to those occurring in the course of the god of growth; Nnada of the Silver disease described hy Sir William Gull

Balder, the graceful god of light and | Hand,' who may have been a harvest god; Manannan, god of the seas; and Lug, the sun-god. The principal British Celtic divinities, as treated in the Welsh Mabinogi and other myths, The principal wore Llyr, god of the sea, and his sons, Bran and Manawyddan, all associated with the ocean; Don, the British equivalent of the Irlsh Danu; Gwydion, a sort of Celtie Protous; Arianrhod, an earth-goddess; and Govannon, equivalent to Vuican. In the Arthurian romances we find many mythological characters disguised. but any consideration of these cannot be embraced in the limits of this article.

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of the three districts and also of its eap., in the Island of Leshos. The latter is divided into Moiyvo in the N., Calloni in the W., and Kastro in the E. Myti-lini, or Kastro, the chief town of this district is built in the shape of an amphitheatre surrounding a small hillsurmounted by an ancient fortress. It was at first situated on an Island close to the E. coast of Lesbos, but as the town grew, the islands were joined by a causeway, and Mytllini expanded along the coast. During the Peloponnesian War the town revolted, and was hesiegod from 429-427; it was the scene of a hattle between Callicrates and Conon in 405. Pompey raised Mytilini to the status of a free community, Pop. 20,000.

Myxedema, a metaholio disease caused by disturbance of the function of the thyrold gland. This gland, which lies in front of the windpipe, is one of the so-called duetless glands. Its functions are not definitely known, but it is thought that its secretion alds metaholism either by counteracting poisons normal to the natural incidence of metabolism or hy aiding in the absorption of proteid matter. the gland be removed by operation a state of sluggish metabolism sets in, with depression of mental function.

in 1873, and known as 'Gull's Disease' or M. The body increases in bulk, and the subcutaneous tissue of the face and hands becomes infiltrated with a mucin-like substance, eausing a swelling which does not pit on pressure. The mental processes become sluggish, the speech becomes halting, and there is marked loss of mental and physical One of the characteristic symptoms is a total absence of sweating. The disease may run its course for many years with gradually increasing intellectual and physical incapacity. The connection of the disease with the loss of activity of the similarity of the symptoms to those of operative M. the existence of cases in which the thyroid gland is shown to be atrophied, and the fact that administration of thyroid extract causes a marked amelioration of the symptoms. symptoms is a total absence of sweat-

Myxogastres, Myxomycetes, Mycetozoa, a group of widely distributed organisms numbering some 500 species. Their exact biological position is still a matter of uncertainty. Some of them were known by the middle of the 19th century, and were understood to be fungi, but the spores on germination, instead of producing germ tubes, give rise to amæboid bodics; these have the

written rst limb was N, into N.

symbol was nun, 'fish,' and the Greek w. The sound of N is determined by the position of the tongue against the people, who occupied nearly palate. N, in English, stauding by whole of Arabia Petrea, on sound. Thus in branch it is a palatal, upon them by Atheneus, general of while before g and k (e.g. bank, thing) King Antigonus I., which ended in it is a nasal. N and M

hen

b, p, and f, as in line, Cambridge, homp and comfort, from O.E. linden, Canta byrig, hænap, and Late Latin, confortare, respectively. On the other hand, a medial N may be derived from an M, as in ant (O.E. æmetë, M.E. emet, amet). N is often found in con-junction with D, the latter dental being used to clinch the sound of the being used to clinical the solida of the former. Thus D, is frequently introduced between N and L, or N and R, as in spindle (O.E. spinel), thunder, (O.E. & unor). Finally, D is sometimes dropped (e.g. woodbine, O.E. wudubinde), and sometimes developed (e.g. sound, O.E. sunn). Initially, the work normals etymology or care. through popular etymology or care-less pronunciation, N has been introduced in nickname, newt, etc. (O.E. edc + nama, efete), and dropped in adder, apron, etc. (M.E. orange, norange, nadder, naperon).

Naaldwijk, a vil. and com. of S. Holland, Netherlands, 13 m. W.N.W.

of Rotterdam. Pop. 6403.

Naas, a market th. of co. Kildare, Ireland, 9 m. S.W. of Dublin. It was once the capital of the kings of Leinster. There are infantry barracks close to the town, and Puncheston racecourse is 2½ m. to the S.E. Pop. 3836.

Nääs, a vil. in Sweden, 20 m. N.E. of Gothenburg, with a celebrated oducational establishment.

Middelburg. It War, 1899-1902.

the Eng-scaport on Great Liukiu Is., Japan. iost lan-Sugar, cotton, and silks are exported. Pop. 48,000.

Nabal, or Nebal, a tn. and port of Tunis, on the N. side of the Gulf of Hammamet, 40 m. S.E. of the city of Tunis. Near it are the ruins of the ancient Neapolis. It manufs. pottery.

Nabatæi, or Nabathæ, an Arabian whole of Arabia Petrea, on both painte. N, in Enghan, standing by whole of Arabia Fetrea, on oth fiself, is alveolar, and is pronounced sides of the Elainitic Gulf of the Red with the tongue against the teeth Sea and the Idunaean Mts., where sockets by drawing the breath they had their rock-hewn capital, through the nose. It is palatal or Petra. We first hear of the N. in guttural according to the following 312 B.C., in connection with the attack sound. Thus in hearch it is a rablatal mon them by Atheneus general of

gradually advanced. of the 2nd century to be reckoned with.

N. cventually fell under Roman power, and the last was heard of them in 106 A.D.

(b. 1605), an Nabbes, Thomas

ecr as a is ohief 1633:

Hannibal and Scipio, 1635; Spring's Glory, containing his best work; and a continuation of Knolles's General Historie of the Turkes. See A. H. Bullen, Old English Plays, 1887.

Nabha, a feudatory state, Punjab. under British India, under Cap., Nabha. protection.

Cap., Nabha. Area 930 sq. m. Pop. (state) 300,000; (town) 18,000. Nabis, a ruler of Sparta (206-192 R.c.). He usurped the throne and allied himself first with Philip of Macedon and later with Rome. In 201 B.C. he took Messene, but was driven out by Philopemen in 200 B.C. Later he ravaged the surrounding territory and occupied Argos, but was driven out by the Corinthians. He was assassinated by Alexamenus.

Nablus, or Nabulus, a tn. of Palestine, 33 m. N. of Jerusalem. It manufs, a special brand of soap containing olive-oil. It is near ancient Sheohem. Pop. 25,126.

Nabob, a corruption of the Hindustani nawab, originally used only as a title for native Indian rulers, great officers of the Mogul's court, Naauw Poort, or Naauwport, a vil. great officers of the Mogul's court, in the dist. of Colesberg, Cape of and governors of provinces. The Good Hope, S. Africa, 25 m. N.W. of title was also used for the governors-Middelburg. It figured in the Boer general of the British possessions. In the 18th century the title came to be Naba, Napa, or Nafa, a tn. and used familiarly for any person who

Nabua, a tn. in the prov. of Ambos Camarines, Luzon, Philippine Is., 20 m. S.E. of Nueva Caceres. Pon. 18,893.

Nacajuca, a tn. of Tabasco, Mexico, on the Conzales R., 13 m. N.N.W. of San Juan Bautista. Pop. 11,000.

Nacaome, a tn. and mining dist. iu the dept. of Choluteea, Houduras. Central America, 60 m. Tegueigalpa. Pop. 12,000. S.W.

Nachod, a tn. in Bohemia, Austria, on the R. Mottau, 109 m. E.N.E. of Prague. Pop. 11,812.

Nachtigal, Gustav (1834 - 85), German explorer, born at Eichstädt, near Stendal. In 1869 he set out from Tripoli on a mission from the King of Prussia to Bornu, visiting Tibesti and Borku, hitherto unvisited by Europeans, and by way of Bagirmi, Wadai, and Kordofan, arrived un-expectedly at Khartoum in 1874. In Sahara und Sudan (1879-89) ho published an account of his travels.

lished an account of his travels. In 1882 he was appointed German consul-general at Tunis, and in 1884 special commissioner to W. Africa. Nacrite, a rare unisilicate mineral occurring in four-sided prisms in metamorphic rocks, both schistose and granitic. It is friable in character, gleaning, and pearly, consisting of greenish-white scaly plates, greasy to the touch. It comes under the species Kaolinite, and is found in the species Kaolinite, and is found in Wieklow in Ireland, and in N. America.

Nadaillae, Jean François Albert du Pouget, Marquis de (1818-1904), a French politician and archæologist, born at Parls. He filled the offices of prefect of the Basses-Pyrénées from 1871-76, and of prefect of Indrc-ot-Loire, 1876-7. His works include: Les premiers hommes et les temps pré-historiques, 1880; L'Amerique pré-historique, 1882; L'Homme Tertiaire, 1885; De la période glaciaire, 1884; Mœurs et Monuments des peuples préhisteriques, 1888, etc.

Naden, Constance Caroline Woodhill (1858-89), an English authoress and poetess, born at Edgbaston. She was much esteemed by Gladstone for ber poems. Her works include: Songs and Sonnets of Springtime, and A Modern Apostle and other Poems.

Nadir (Arabic nazir), an astro-nomical term denoting the point in the beavens which is directly beueath our feet as that directly over-bead is called the zenith. A line bead is called the zenith. drawn from our feet through the centre of the earth would cut the

returned from a far country with He drove out the Afghans from great riches.

Persia and restored Tamasp II. to his throno (1725-27); N. himself imprisoned bim and became regent for his infant son Abbas III. (1732). The latter died in 1736, and N. was crowned. He extended his kingdem as far as Kandahar and Delhi (1738-89), but his tyrannical government eaused much disaffection, and he was assassinated. See Life by Maynard, 1885.

Nafels

Nadiya, or Nabadwip, formerly the cap. of the Nadiya dist. in Bengal, India, and was situated on the Bhagratbi R., which has since altered its course. Near by is the battle-field of Plassey. Pop. 11,000

Nadol, a tn. containing famous ruins in the Jodhpur state of Rajputana, India, and is 68 in. N.N.W. from Udaipur.

Naegeli, Johann Georg (1768-1836). a Swiss musical compeser, born at Zürich. In addition to composing music, he published and edited the best classical works, including Beethoven's sonatas.

Naestved, a market tn. in the ce. of Praesto, Denmark, and 58 m. S.W.

of Copenhagen. Pop. 8326.

Nævius, Gnæus, a Roman peet, born about 265 B.c. He came into prominence in 235, and composed au epic poem as well as writing tragedies Gı

and ranks only second in importance to the Latin authors of his day.

Nævus, an arca of pigmentatiou, or mole; a tumour of the skin composed almost entirely of enlarged blood-vessels. A mole is not dangerous, and does not tend to spread, therefore it usually requires no treattherefore it usually requires no treatment, unless it is desired to remove it for the sake of appearance. A vascular N. may diminish in size of itself, in which ease no treatment is necessary; or it may show a disposition to cularge, thus constituting a possible danger through hemorrhage. The N. may be considery consisting. The N. may be capillary, consisting of enlarged capillaries giving rise to a purplish mark known as 'port-wine stain': it may be veneus, consisting of enlarged veins, giving a bluish appearance; or arterial, when pulsation cau be felt. It is often congenital, being popularly known as 'mother's mark,' owing to the superstition that the mother's longing for a strawberry or raspberry during pregnancy has impressed the mark upon the foctus. The N. may be removed with the knife, or by tightly ligaturing the celestial sphere at the N. In figura-knile, or by tightly ligaturing the tivo language, the lowest point or lowest stage of depression.

Nadir, Shah of Persia (1688-1747), tbe Conqueror, born at Khorassan.

Knile, or by tightly ligaturing the base, or the bleod may be congulated by electrolysis and other agents.

Näfels, a vil. in the cauton of Glarus, Switzerland, on the R. Linth,

4 m. N. of Giarus. The seene of a wrote Pflanzenphysiolögische defeat of the Austrians by the Swiss in 1388. Pop. 2600.

Naga, the name given to defined serpents in Hindu mythology; Sesha, the king of the snake world, is the sacred scrpent of Vishnu.

Nagano, or Zenkogi, a tn. of Hondo, pan. Its fine Buddhist temple is adorned with beautiful wood-carving. Pop. 40,000.

Nagar Karnul, a vil. of India, 62 m. of Haiderabad, on a trib. of the R.

Kistna. Pop. 6500. Nagar Koil, a tn. in Travancore, India, 40 m. distant from Tinnevelli. Pop. 12,000.

Nagas (naga, a snake), the name of a non-Aryan tribo of India, to which great virtues were ascribed. According to Indian mythology the N. are a race of demons descended from Kadin, the wife of the sage, Kasyapa. Kadin, the wife of the sage, Kasyapa. They have a jewel in their heads, It is a sage of the sage lore). The old sage, Gauge, one of the fathers of Indian astronomy, was said to owe all his wisdom to the god Sesha.

Nagasaki, a city and port of Japan, opened to foreign commerce, by the treaty of 1858, on July 1, 1859, is situated at the western extremity of the peninsula of Fizen, which forms the N.W. portion of the island of Kiushiu. The harbour, which is one of the most heautiful in the world, is ahout 6 m, in width, and 3 or 4 m, in The hills surrounding the harbour are broken into long ridges and deep valleys; while the more fertile spots are terraced and under cultivation. The town of N., which is about a mile in length, and three-quarters of a mile in width, lies on the N. sido of the bay. On the opposite side of the hay there are shipbuilding yards and engine works. N. is an important coaling station. The climate is genial. The exports, which include tea, cement, coal, rice, lacquer ware, porcelain, etc., are valued at £340,000 annually, and the imports reach £900,000. Pop. 178,074.

Luzon,

Nagcarlan, a pueblo of nilippine is. Pop. 10,000.

Philippine Is. Pop. 10,000. Nägeli, Karl Wilhelm von (1817-Någeli, Karl Wilhelm von 1891), a German hotanist, horn near Zürieh. After studying at Geneva University, and was ultl-Zürich appointed professor-extraordinary of that institution. He

Untersuchungen (with Cramer), Die Neuern Algensysteme, and Mechanisch-physiologische Theorie der Abstammungslehre.

Nagina, a tn. of the United Provinces, India, in the dist. of Bijnaur, with an important trade in sugar, cotton cioth, and glass ware. Pop.

22,000.

Nagle, Sir Edmund (1757-1830), a British admiral. He became cantain in 1782, and saw active service off the coast of America and later during the war with France. He became rear-admiral in 1805, vice-admiral in 1810, and nine years later admiral. He was for many years a boon companion of the Prince of Wales (afterwards George IV.).

Nagode, a native state of Central India. Area 450 sq. m. It has two important towns, Nagode, formerly a

military station, and Uncheehra, the capital. Pop. of state, 75,000.
Nagoya, a fortified tn. of Hondo, Japan, 94 m. E.N.E. of Kyoto. It owns the famous Seto potteries as well as fine cotton mills. Textile fabrics are manufactured here. Pop.

378,271.
Nagpur: 1. A div. of Central Provinces, India, oxtends immediately N.E. of the Nizam's dominions. The N. part of the province is mountainous in character, being traversed by spurs of the great Vindhya Range. The climate is not healthy, and is especially insalubrious in the extensive tracts of low marshy land which abound. Area 23,521 sq. m. Pop. 3,728,063. 2. A city of India, cap. of the Central Provinces and Berar, 450 m. E.N.E. of Bombay. Cotton cloths coarse and fino chintzes, turbans, silks, brocades, blankets, woollens, tent-cloths, and articles in copper and brass, are manufactured. 101,415.

Nag's Head Consecration, a legend circulated by the Roman Catholies in Queen Elizabeth's reign concerning Archbishop Parker, who they de-clared had heen consecrated in a most irregular manner at the Nag's Head, Cheapside.

Nagy-Banya, a royal free city in Szatmar eo., Hungary, 90 m. N.E. of Dehreeziu. It possesses a Minorite convent and gymnasium, and there are gold, silver, and lead mines controlled by the state. Pop. 12,000.

Nagy-Booskore, 8m. E.N. of Torontal co. in Hungary, on the Bega, 45 m. N.E. of Temesvar. There is a trade in cattle and corn. Pop. 26,000.

Nagy-Boosko, a com. of Maramaros co. in Hungary, 8 m. E.N. E. of Maramaros-Sziget. Has chemical works.

Pop. 5300.

Nagy-Enyed, a tn. of Transylvania

Hungary, 32 m. S.E. of Klausenburg., formed by the much cheaper process Pop. 7500.

Nagy-Kallo, a eom. of Szoboles eo., Hungary, 35 m. N.N.E. of Debreczin,

Pop. 7500.

Nagy-Karoly, cap. of Szatmar co., Hungary, 40 m. E.N.E. of Debreczin. Here is the eastle of the Counts Karoly. Haslinen and cotton manufs. Pop. 15,000.

Nagy-Kikinda, a tn. in Torontal co., Hungary, 37 m. W. by N. of Temes-var, with important trade in wheat and fruit. Pop. 25,000.

Nagy-Körös, a tn. of Pest eo., Hungary, 45 m. S.E. of Budapest. It is famed for its melons. Pop. 27,000. Nagy-Maros, a com. of Hont co.,

Hungary, on the Danube, 20 m. N.W. of Budapest. Pop. 4200. Nahant, a seaside vil. in Essex co..

Massachusetts, U.S.A., and 9 m. from Boston. Pop. (1910) 1184. Nahuath, or Nahuatlan Stock, the name given to a race of American Indians in Mexico. This term was applied to the Nahuas, and to a few isolated tribes in Central America at the time of the Spanish conquest.

Nahum, the seventh of the minor prophets, is described in the title of his work as an Elkoshite, and the

described with great vigour and mai the

8-1C will be as little able to avoid destruetion as was Thebes (No-amon), and it is from this reference that the date of the prophecy must be fixed. From it one can say certainly that N. prophesied between 664 and 607 B.c. See A.B. Davidson's 'Nahum, Habakkuk, and Zephaniah,' in Cambridge Bible, 1896.

Naihati, or Nychatte, a tn. of Bengal,

India, 22 m. N. of Calcutta. Pop. 24,000.

Nail. Until a comparatively recent period almost every kind of N. was produced by hand-labour: each N., however minute, was separately forged from a thin rod of iron, a process which is still followed in the production of what are technically known as wrought Ns.; and as Ns. so those formed either by casting, or by has a harbour with pier and break-eutting or stamping out of rolled water. Fishing is the main industry.

of casting have been long used. Common cast Ns. are, however, so clumsy and so brittle that they can only be used for a few coarse purposes as in plasterers' work, and in the nailing up of fruit trees. introduction of great improvements in the manufacture, however, a very useful kiud of cast N., of an exceedingly pure material has been successfully introduced for certain descriptions of woodwork. They are annealed to such perfection that the

quite unsuitable for use in hard woods. In the making of cut-nails. the Ns. are cut from sheet-iron of suitable thickness, which is first reduced, by eutting transversely, into strips or ribands of a breadth equal to the intended length of the Ns. These strips are then applied to a machine in which a chisel-shaped outter descends with sufficient force to eut off from the end of the strip, at each downward stroke, a narrow picee sufficient to form one N. As the Ns. are required to he of a tapering form, the cutter must be so fixed as to form a slightly oblique anglo to the direction in which the strip is pushed into the machine, and this obliquity must be reversed or varied between each stroke, by means similar to those adopted in comb-cutting machinery.

Nailsworth, a tn. in Gloucester-shire, England, 4 m. S. of Stroud, with manufs, of stockings, boots, and pins. Pop. (1911) 3031. Nain, an ancient tn. of Galilee, 26m.

S.E. of Acre. Mention is made of this eity in St. Luke vii. 11. N. is also a station of the Moravians on the

Labrador eoast.

Naini Tal, a dist. and tn. in the United Provinces, India. Tho dist., which is well wooded, has an area of 2677 sq. m.; the principal crops are wheat and rice, some fruit, and a little tea in the hilly parts. Fop. 320,000. The tn. is 70 m. N. of Barcilly, and is the summer headquarters of the provincial government. Alt. 6400 ft. Pop. 8500.

Nairn, a royal (1124) municipal formed possess certain advantages, burgh, and eo. tn. of Nairnshire, Scot-for particular kinds of work, over land. It lles on the Moray Firth, and

sheet metal, there is no reason to Freestone is quarried, and there are and twinery factories. The good one and fine golf course have it a favourite summer resert. (1911) 4661.

Nairne, Carolina Gliphant, Baroness | Peopled by Hottentots, lying N. of (1766-1845), a Scottish song-writer, the Orange R. Angra Pequena. on born at Gask, Perthshire. She was talled the 'Flower of Strathearn' on The cluef productions of the region are account of her striking beauty. She wrote songs under the pseudonym of the prov. of the Cape of Good Hope of Mrs. Bogan of Bogan' or B.B. The and S. of the Orange R. There are most popular ones are Land o' the last Charlie is my Darling; Caller the region is barren and is covered therein.

Nairr Scotlan

Moray : the counties of Iuverness and Moray, ostriches on the grassy flats of the

Salmon fis dustry. the county

presents particularly attractive and romantic seenery in the neighbourhood of Cawdor Castle, one of the residences of the Earl of Cawdor. Area 162 sq. m. Pop. (1911) 9319. Nairobi, a tn. in British E. Africa,

and cap, of the prov. of Ukamba. It can be approached by the Uganda Railway. Pop. 14,000 (800 Europeans).

Naivasha, a tn. in British E. Africa, in the prov. of Naivasha, and close to the lake of same name. It is 39 m.

distant from Momhasa.

Najibabad, a municipal tn. in the Bijnor dist. of the United Provinces, India, lies 55 m. N.E. of Meerut. An extensive trade is carried on in sugar,

timber, and cotton cloth. Pop. 20,000. Nakhichevan, a tn. of Russia in Transcaucasia, 85 m. S.S.E. of Noah is supposed to have Erivan. settled here after the deluge. 9000.

Nakhichevan-on-Don, a tn. of S. Russia, in the prov. of Don Cassacks, on the r. b. of the Don, and near the mouth of that river, 2 m E. of Rostov. It was founded in 1779 by Armenian settlers, and has 30,000 inhabitants, mostly Armenians. Tobacco, candles, and tallow are manufactured, and there are tanneries and brick works.

Nakskov, cap. of Laaland, Denmark, 82 m. S.W. of Copenhagen. Brewing and sugar refining

carried on. Pop. 8400.

Namangan, a tn. of Russian Central Asia in the upper valley of Syr Daria. 36m. N.N.W. of Marghilan, Petrolcum

hood. Pop. 74,000.

Namaqua, the name of a Hot tot tribe inhabiting Namaqual S. Africa. Of all Hottentots are by far the purest survivors, only the racial type, but their own consist in place names. language. Khoi-Khoin is the name this direction, the numb

Namapualand, or Namaland: 1. modern philologists l Great, a region of German S.W. to a mere handful.

Bushman country. Area 20,635 sq. m. Pop. (estimated) 20,000.

Nam-dinh, a fortified in. of French Indo-China, on the Tong-king branch of the Song delta, 47 m. S.S.E. of Hanoi, and cap. of the prov. of the same name. It is the seat of a

the same name. It is the seat of a French envoy. Pop. 50,000. Name Day: 1. On the Stock Exchange it means the second day of the periodical monthly (for British government and allied stock, etc.) or fortnightly (for settling day. On other securities) On the second day a ticket, giving the name and address of the ultimate buyer, and the firm who will pay for the stock, is passed through various intermediaries to the ultimate seller, so that the transfer of stock may be made directly. In the mining market the passing of names takes two days. If the ticket is not passed out by the buyer, the seller may sell out the securities through the official broker, any difference in price being made up by the buyer. N. D. is sometimes called ticket day. 2. The day which is sacred to the saint whose name borne by a person. The term is naturally used principally in Roman Catholic countries. Names (O.E nama, Ger. name;

cf. Lat. nomen, Gk. ovoua, the title by which a person, place, thing, or class of persons, places, or things, N. known. which have come particularly complex in formation and which are therefore extremely interesting, are those of persons and places. Placenames, when carefully and scientifically studied, and coal arc found in the neighbour-furnish much information as to the

are the only tribe to preserve not of the Celtic inhabitants of Britain Except in this direction, the number of words by which they call themselves. A which the present inhabitants of dictionary of the Namaqua language was published by Tindall in 1852. 1. modern philologists have reduced it ureat, a region of German S.W. to a mere handful. In place N., Africa, is a desert land sparsely however, that commonest of riverthe r dun, aber place in the eastern counties during the 9th century has led to the towns and villages of that district being largely derived from the Scandina-vian. Thus, the commonest of all place-N. terminations in the Lincolnshire district is -by, the Norse for a It is almost impossible to mention any of the vast number of Saxon place N., for the great majority of those in England come from that Common and obvious suffixes are -ham and -ton. Frequently the root of the N. is that of the original possessors of the land, sometimes a tribe, sometimes a family, sometimes an individual, as in the case of Anlaby (from Anlaf), Rowiston (from Hrolfr). Roman influence in Britain as throughout the Continent was primarily milltary, and in this country it never made much advance

local features, even from trees, as in the cases of As shot, Olney, & vestigation of of place N. is a

times extremely difficult, requiring an accurate knowledge of philology, for in the course of ages, assimilation, corruption, and popular attempts at ctymological correction have often altered the names almost beyond reeconition. Personal names are, in general, more easy to explain than are place-N., though their history is more complex. Among uncivilised as well as among civilised peoples the abiliar of giving each child

beyond this stage. The Roman

castra, a camp, appears in many forms, either alone or as a suffix (e.g. Chester, Doncaster, Dorchestor).

Other N. are derived from prominent

among unsomotimes · arc ehosen u, or from

somo event showing 140 circumstauces of the birth. This method of naming children is well shown in the early books of the O.T. The N. of the gods of the

of the N. velopment, meaning ar

privato N. on purely By the time

N. were already many in number, but three of them were of special importance. The first N. was purely personal and belonged to the individual. It was known as the Pranomen. Common Roman pranomina were

· · · · · · Caius, Caius, Marcus, Titus, C Following this came the Quintus. Nomen (gentile) which belonged to all mcmbers of the gens and those connected rivers'; and ben, 'a mountain. Inc. with it or adopted into it. Among great settlement of Danes which took patrician gentes the nomen almost with the or adopted into it. Among patrician genies the nomen almost invariably ended in its. The cognomen, or surname, was the family N., and was generally derived from some personal quality or peculiarity, as in the cases of Naso, Torquatus, Lepidus, Longulus, or from geographical Sabinus and . he caso of Cait the prænon , and Cæsar the cognomen. Of these N., either the first or the last might be used alone, the first two, or the first and last, might be used in combination, but it is interesting to note that the present popular designation, Julius Casar, is the only one that would never have been used by the Romans themselves. In addition to these three N., a fourth was sometimes given. generally in recognition of some great deed or conquest. Thus, it was by his exploits against Carthage that Scipio obtained his agnomen. cognomen secundum, of Africanus. Similarly, we have the additions Asiatleus and Creticus. When a man When a man was adopted into another family he took all the three N. of his adopted father and to these he added a second cognomen derived by the addition of anus from his old nomen. Thus, when daius Octavius, grandson of Julia, tho sister of Julius Cæsar, was adopted by his great-uncle, ho became known as Caius Julius Cæsar Octavianus. To these N. was added in 27 B.C. the N. of Augustus. At the present day the child's personal N. is known as its Christian or baptismal N., having generally been given on the occasion of its baptism. During the early middle ages, a man had no N. but this. In course of time the necessity for some further distinction arose, and a man was described according to bis trado, his residence, his father's N., or some personal peculiarity. The historical novel has familiarised overy one with these various types of surname, and it is not difficult to trace them in modern English. The prefix at is The prefix at is very common, showing a place of residence, as in the names Atwood, Atwoll, Affield. Many of the occupastrons which have provided us with surnames have now ceased to exist. Such are Dempster (judgo), Serivener (writer), Walker (fuller), ote. A very large number of N. are derived from the paternal Christian N., and in each country particular affixes are used. Thus, in England, we have the

Namur

in Scotland and Ireland the prefixes Mae and Fitz (Fr. fils), in Wales the form Ap, of which the a frequently disappears (e.g. Price from ApRhys). Surnames were very gradually intro-duced, and it is not until the 12th century that they begin to become hereditary. Before and frequently after this time the surname as well as the Christian N. was peculiar to the individual. Now, bowever, it is an established custom that the children should invariably be known by the N. of the father. On the occasion of a woman marrying, it is usual for her to take her husband's surname. See M. A. Lower's Patronymica Britannica, 1860; C. M. Yonge's leographisches

Dictionary of Place Names; Wagner's Names and

Hate Names; Wagner's Names and their Meanings (new ed.), 1892.

Namur' 1. A prov. of Belgium, bounded on the N. by Brabant, E. by Luxemhourg and Llège, W. by Hain-ault, and S. by France. The principal rivers are the Meuse, which entirely intersects the province, the Sambre, and the Lesse. N. presents generally an alternation of fruitful valleys and low hilly tracts; but in some parts, where the heights coustitute off-shoots of the Ardennes, and arc densely wooded, they attain a considerable elevation. Besides iron, copper, lead, and coal mines, N. bas marble and slate quarries, and yields surbly allow additions. sulpbur, alum, cadmium, alumina, flints, etc. It has good steel, iron, and smelting works, brewerles, paper mills, etc. Area, 1414 sq. m. Pop. 365,606. 2. The chief tn. of the above prov., is situated at the confluence of the Sambre with the Meuse, and is a strongly fortified town and the scat of a bisbop. Its cathedral is one of the most beautiful in Belgium; it was consecrated in 1772. N. is noted for its outlery, its leather works, and its iron and brass foundrics. Porcelain,

pottery, and glass are also manufactured. Pop. 31,939.

Nanaimo, a tn. and coal-mining centre on Vancouver Is., British Columbia, Canada, 74 m. N.N.W. of Victolia. Vistolia. Chief exports are coal, lumber, salmon, and furs. Pop. 7000. Nana Kru, or Nanna Kru, a seaport of Liberia, W. Africa, 170 m. S.E. of

Monrovia.

eommoutermination in son or simply ing out of the Indian Mutiny (1857) s. In Ireland we have the prefix O', he joined the rebels, and is remembered for his treachery at Cawnpore (1859), where he caused men. women, and eluldren to be massacred. Ultimately he was attacked and took refuge in the jungles at the foot of tbe Himalayas, and is supposed to bave perished there.

Nan-chang-fu, the chief eity of the prov. of Kwangsi, China, situated on the R. Kan, 175 m. S.S.E. of Hankow, has an extensive porcelain trade. Pop. 100,000.

Naney, a tn. of France, cap. of the dept. of Meurthe-et-Moselle. ou the l. b. of the R. Meurtbe, 175 m. S.E. of Paris. The ancient part of the town is noticeable for its narrow, irregular streets, while the modern part has broad open

view of the handsome Pl

Ville Neuve from the Ville Vieille, and is surrounded by many important buildings, such as the Hotelde-ville and Bishop's Palace. Other interesting features are the cathedral and the church of the Cordcliers, N. is an important rallway centre, and has numerous manufs., including lace goods. Pop. 119,949.

Nandair, a tn. of Haiderahad, India, on the R. Godaveri, 126 m. S.W. of Amraoti. Manufs. muslin. Pop. 14,000.

Nandgaon, a feudatory state of the Central Provinces, India. Area 871 sq. m. Cap., Raj-Nandgaon. 871 sq. m. Pop. 126,000.

Nandi, a dist. in British East Africa N. is also the name of a tribe of

Uganda akin to the Masais.

Nankeen, a cotton cloth of a peculiar yellow shade, which was originally manufactured in Nauking (China), but has heen imitated in other countries.

other countries.

Nankius, or Kianging Fu, the ancient capital of China, now the chief tn, of the prov. of Kiangsu and the residence of the governor-general of three provinces, is situated about 3 m. from the S. bank of the Yangse-Kiang and about 100 m. from its mouth. The ancient palaces have almost entirely disappeared, and the cally remarkable monuments of remarkable monuments royalty that now remain are some sepulchral statues of gigantie size near an ancient cemetery, known as the Tomb of the Kings. Here is the famous porcelain tower, completed Monrovia.

Nana Sahib (1820 – c. 59), the last in 1430 A.D., octagonal in sbape, each of the Mahratta pesbwa Bajee Rao, who was deposed in 1818, and pensioned, adopted Dhondoo Punt, also sioned, adopted Dhondoo Punt, also crape and the cotton eloth called called Nana Sahib. In 1853 Bajee after the city Nankeen. Paper and Rao died, and Nana Sahib claimed Bajee Rao's estate and peusion, but that peace was concluded between the latter was refused. On the break- Englaud and China in 1842. Its

£999,367 and its exports at £401,149. In 1909 the railway connecting it with Shanghai was completed, and Tukow, on the opposite side of the river, is the terminus of a line to Tientsin, opened in 1911. The neighbourhood is marshy, which makes the

elimate dangerous to foreigners who are liable to malaria. Pop. 267,000. Nansen, Fridtjof (b. 1861), a Nor-wegian explorer and seientist, born at Fröen, near Christiania. His first vovage was made in the Viking (1882), his second voyage was made to Greenland in 1888, where he and his companions, Otto Neumann Sverdrup and Captain O. C. Dietrichson, together with others, encountered many hardships in their attempt to cross the great lee-field. The most epochmaking of Nansen's adventures was his voyage in the Fram to the Aretle regions, where he deliberately allowed his vessel to drift with an ice-floe as far N. as he could go, and then abandoned his ship in order to push his way further N. The Fram saled on June 24, 1893. Leaving the Fram, Nansen, accompanied by Johansen, pushed across the ice, wintered in Franz Josef Land, and was pleked up by the Jackson-Harmsworth expedition in 1896. Nansen became remendously popular on account of his plucky enterprise, and received a great ovation on his return to Norway. The explorer lectured at London and other places, and received amongst other honours a special medal from the Royal Geographical Society. Amongst his writings are: Farthest North; In Northern Mists.

Nan-shan (the Sonth Miss.), the name of a range of mountains in Central Asia extending from the SE total.

tral Asia, extending from the S.E. to the N.W. between Tibet and the Gobi desert, from Nan-ehou-fu in Kan-su to the neighbourhood of Sa-ehou. most easterly part of the chain is composed of three parallel ranges, the centre part of two ranges enclosing a lofty plateau, whilst the western portion is a single range. The average height of the range is over 13,000 ft., and the Humboldt spur extends for 60 m. at a height of 16,000 ft. From this spur the Ritter chain extends to the Tsaidan plateau. The N. range includes the S. Kuku-nor and the Semarov ranges, and two ranges discovered and named by Prievalsky. The whole system like the Kuen-Inn, is older than the Tertiary period, and bas large carboniferous beds. Marine formations have been found at a height of 18,000 ft. above sea-lovel.

imports in 1910 were estimated at aluminium. The town contains the shrine of St. Geneviève (420 - 512), the patron saint of Paris; a pilgrimago takes place hither in September.

Pop. (com.) 17,500. Nantes tancient Namneles, or Nan*netes*), an important seaport tn. of France, cap. of the dept. of Loire Inferieure, is situated on the r. b. of the Loire, 30 m. from its mouth. The natural beauties of the site have been much improved by art, and now the noble river on which the town is placed, covered with eraft of every size and description, the islands that stud its channel, and the bridges that eross it and its tributaries here, combine to make the scene a highly pic-turesque oue. This town possesses numerous striking and beautiful buildings; among which the eathe-dral of St. Pierre, containing the drai of St. Pierre, containing the splendid monument of Francis II., the last Duke of Bretagne, and of Mar-guerite his wife; and the old eastle, built in 938, are the chief. Within recent years much has been done by dredging for the improvement of the river-bed, and large vessels can now reach the harbour, which is fairly spacious. The chief manufactures of N. are varieties of linen and cotton fabries, calicoes, flannels; refined sugar and salt, soap, chemical pro-ducts, cordege, sardines, preserved fruits, and ments, etc. It contains tanyards, copper foundries, brandy distilleries, tobaceo and sugar fac-tories. Shipbuilding is engaged in, and the exports include cereals, potatoes, eggs, preserved provisions, hardware, pyrites, and slate. Henry IV. signed the famous Edict of Nantes

here in 1598. Pop. 170,535. Nantes, Edict of, see EDICT OF NANTES.

Nanteuil, Debert (1002 78) a Franch engraver, be

Paris he wa signer and engraver to the king, with a pension. He modelled his work with great exactness, according to nature, and gave them marked individuality.

and gave them marked individuality.

Among his finest portraits are those
of Mazarin, De Bellièvre, Turenne,
Jean Loret, and Anne of Austria.

Nanticoke, a bor. in Luzerne co.,
Pennsylvania, U.S.A., 100 m. N.W.
of Philadelphia. Coal Is mined in the
vicinity. Pop. (1910) 18,877.

Naphuket a in, and cap. of Nan-

Nantucket, a tn. and cap. of Nan-tucket co., Massachusetts, U.S.A., on the island of Nantucket (51 sq. m.), 28 m. S. of Cape Cod Peninsula. It is chiefly important as a summer resort. Pop. (1910) 2962.

Nanterre (ancient Nemplodurum, or Nemetodurum), a tn. of France in the dept. of Seine, 8 m. N.W. of Paris by land. It has manufs. of tallow and is visited for its brine baths. There

are tanneries, flour-mills, iron foun- nous flame, N. is sometimes used for

and textiles. Pop. (1911) 7816. Naoroji, Dadabhai (b. 1825), the first Indian member of the House of Commons, is the son of a Parsi priest, born in Bombay. He was educated at the Elphinstone College there, and in 1854 became professor of mathematics and natural philosophy at the same college. In 1855 he visited England, aud in 1867 succeeded in fouad-ing the East India Association, and in 1870 obtained the admission of Indians to the Civil Service. In 1874 he became Prime Minister of Baroda, from 1885-87 was a member of the Bombay Legislative Council, and at the General Election of 1892 was elected M.P. for Central Finsbury.

Rights of Labour, 1906. Napa, the cap, of a co. of the same name, California, U.S.A., 39 m. N.E. of San Francisco. It has tanneries, woolien and planing mills; the Napa soda springs, and deposits of quicksilver, copper, and silver are in the neighbourhood. Pop. (1910) 5791.

He is the author of Poverty and Un-British Rule in India, 1901; The

Napanee, a port of entry of Ontario,

and manufs. of Naphtha, a to to the liquid

neighbourhood The natural oils of other countries that became included under the term 112° which has now been restricted to the mixture of low-boiling hydrocarbons obtained in the fractional distillation of petroleum, coal tar, and shale oil. The paraffins are petroleum Ns., and olefines and paraffin are obtained from shale oil. Coal tar N. collected up to 170° is a crude light oil which is redistilled fractionally for 'solvent redistilled fractionally for naphtha, or burning naphtha. which consists of xylenc, pseudo-cumenc, etc. All these Ns. are volatile, highly inflammable liquids, with the odour of benzene, and are valued as burning oils and solvents for gums, resins, etc. Wood N. is crude woodresins, etc. spirit.

Naphthalene (C10H8), an aromatic hydrocarbon, occurs in coal tar. Crude crystals of N. are obtained by fractional distillation of coal tar between 170°-230° C. These are treated with sulphuric acid, and pure N. is finally obtained by distilling in steam. It crystallises in large Instrous plates, melts at 79° C., and boils at 218°, and has a sp. gr. 1.

istie odour, is

dries, and manufs, of boots and shoes carburetting coal-gas, but its chief use is for the manufacture of derivatives which are used as dycs. oxidation with dilute nitric acid, phthalic acid is formed, proving that N. contains the benzene group, and its constitution has been shown to be that formed by the condensation of two benzene rings. Two classes of derivatives are formed, called a or B according to the position of the euter-

ing groups. Naphthol (C₁₀H₃OH). The naphthols (a and β) are monohydroxy derivatives of naphthalene, correspond with the monohydric phenols, which they resemble in properties, and are used as sources of dyc-stuffs; a naphthol (melting point, 94° C.; boiling point, 280° C.) is prepared from a naphthylamine, and is a colourless crystalline substance with a faint smell, soluble in alcohol and ether, but sparingly soluble in hot water. The \$\text{\$\text{\$\gamma_{\text{right}}}\$ point, 122° C.; boiling point, 286° C.) is soluble in water, its solution giving a green coloration to ferric chloride, while the a compound gives a violet coloration.

Naphthylamine, or Amido-Naphtha-Canada, cap. of Lennox co., on the lene (C₁₀H₁NH₂), occurs in a and a Napance R., 2t a naphthylamine is a talline substance with

aell (melting point, 50° nint, 300° C.), prepared nitronaphthalene. The prepared from \$ naph-

is odourless (melting point, 112° C.; bolling point, 294° C.). Both varieties and their derivatives are extensively employed in the manufacture of dyes.

Napler, a seaport and winter resort on the E. coast of North Is., New Zealand, on Hawke's Bay, 200 m. N.E. of Wellington by rail. It has a good harbour, Port Ahuriri, protected by a breakwater. Large quantities of wool, tinned and frozen meat are

exported. Pop. 10,000. Napier, Sir Charles (1786-1860), a British admiral, cousin of Sir Charles James N., born at Mcrchiston Hall, near Falkirk. He eatered the navy in 1800, and took part in the capture of the W. Indies in 1806-8. In 1811 he saw active service in the Mediterranean. Two years later he went to America on the expedition up the Potomac, and was put in command of the Galatea off Portugal, 1829. 1833 he was asked to take command of the Portuguese fleet, with which he was victorious off Cape St. Vincent. In the Syrian War of 1840 he stormed Sidon, and in 1854 was commauderin-chief in the Baltic against Russia. Insoluble in He twice sat in parliament: for soluble in hot Marylebone (1842-46), and for Southits vapour burns with a highly lumi-lwark 1855-60). See Life and Corre-

1862.

Napier, Sir Charles James (1782-1853), a British general and statesman, born in London. He fought in the Irish Rebellion (1798), in Denmark (1807), and was wounded and taken prisoner at Corunna (1808). He returned to the Peninsula in 1811, took part in the expedition to Chesapeake (1813), and after peace was signed became governor of Cepha-lonia (1818). In 1841 N. was dispatched to India, and two years later won a great victory at Meeanee, by which be subdued the rulers of Sindh. His administration there was described by his brother, Sir W. F. P. Napier (1851), who also wrote a biography of him (1867). He himself wrote many books, chief of which are Colonisation, 1835, and Defects, Civil and Military, of the Indian Government, 1853

Napier, Sir Francis, ninth Baron Napier, first Baron Ettrick of Ettrick (1819-98), a diplomatist, born at Thirlestane in Selkirksbire, and began his career, in 1840, at Vienna and Constantinople, afterwards being sent to the United States and then to the Hague. From 1860-64 be was ambassador at St. Petersburg, and from 1864-66 at Berlin. In 1866 he becamo governor of Madras. After a temporary appointment as governorgeneral of India he returned to

England.

Napier, John (1550-1617), laird of Merchiston, the inventor of logarithms, was born at Merchiston Castle, near Edinburgh, and educated at the University of St. Andrews and on the Continent. In 1614 he published his invention by which since, tangents, etc., may be briefly calculated in his treatise, Logarithmorum Canonis Three years later he Mirifici Descriptio. wroto Rabdologiæ seu Numerationis per Virgulas libri duo, describing an ingenious method of multiplying and dividing, knownos 'Napier's bones, 'or' 'rods.' N.'s Plaine Discouery of the whole Revelation of Saint John (1593) enjoyed great popularity during his lifetime. Consult Lives by the Earl of Buehan, 1787, and by Mark Napier, 1834; and an article by W. R. Mondoweld in the Difference of the Professional Control of the Profession of the Professi Dictionary Macdonald tho in of National Biography.
Napier, Maevey (1776-1847), editor

of the Edinburgh Review, born of II., it Glasgow. He become Writer to the now Signet (1799), Signet librorian (1805) atten 37), and profess the Edinburgh

edited the fifth Brit. (1816-24),

spondence by Mojor-General E. Nopier, J. S. Mill, Brougham, and Sir James Stepben. See his Correspondence, 1879.

Napier, Sir William Francis Potrick (1785-1860), a British soldier and historian, a younger brother of Sir Charles James N., born at Celbridge, near Dublin. He joined an Irisb regiment in 1800, and subsequently fought in Denmark (1807) ond in the Peninsula (1808). His History of the Warin the Peninsula (6 vols., 1828-40) is a classic. His other works are: Conquest of Scinde, 1845; History of Sir Charles Napier's Administration of Scinde, 1851; Life and Opinions of Sir Charles Napier, 1857. Consult Life by Lord Aberdare (2 vols.), 1862.

Napier of Magdala, Robert Cornelis Napier, first Baron (1810-90), a British field-marsbol, Colombo, born at Ho served with distinction Cevlon. Ceylon. Ho served with distinction through the two Sikh wars; was present at the relief of Lucknow, and afterwards defeated Tantia Topi on the plains of Jaora Alipur. In 1868 be was put in command of the Abystatical and the Abystatical and the Abystatical and the Abystatical and the Abystatical Action 1868. sinian expedition, and on account of his brilliant services at the storming of Magdala was created a peer. Sub-sequently be was appointed commander-in-chief of the forces in India (1870), governor of Gibraltar (1876-82), and constable of the Tower (1886). He was made field-marshal in 1883. See Memoir by R. Maelagan.

Napier's Bones, or Rods, sec NAPIER,

JOHN.

Naples (It. Napoli): 1. A prov. in Campania, Italy. It occupies a constal plain of the R. Volturno overlooking the Tyrrhenian Sea, and is backed by the Matese Mts. of the Apennines. Its climate is almost tropical yet salubrlous, but with the drawback of a dry summer; it is extremely fertile, and its people are laborious and frugal. Olivo, vine, chestnuts, corn, hemp, and cotton are grown; besides shipbuilding, there are manufactures of machinery, chemicals, motors, lace, chocolato, musical cotton, paper,

shores the naval defence. The unlversity, founded in 1224 by Frederick II., is one of the oldest of Italy and Italy, the largest in belng attended by nearly 6000 students and auditors. It lies some 100 m. S.E. of Rome, with which it communicates by means of 125 m. of rallway 1884, after a bad outbreak of cholera, ceeded Jeffrey os editor of the Edin-tho town has been vastly improved, hurgh Review, omong bis contributors the old town belog demolfshed, rebeing Macaulay, Hollam, Thackeray, drained, and rebuilt. The Musco

Borbonico, built in 1586, contains the king's expense in the school biological station is one of the finest in Europe. Among its buildings are the Castel Nuovo, 1283; the castle of St. Elmo, 1343; the royal palace, 1600, cnlarged and furnished as a summer residence in 1900; Castel Capuano; the Cathedral of St. Januarius, completed in 1316; several fine churches. and many theatres, notably the San Carlo, rebuilt after the fire in 1816. Originally a Greek colony named Parthenope, a new town, Neapolls, was built by a later colony. Naples was captured by the Romans in 326 B.C., and became a resort of the upper elasses on account of its Greek culture and elimate. Virgil composed the Georgies here, and was buried at Posilipo. It was taken, 536 a.D., by Belisarius, recaptured by Totila in 542, again taken by Narses in 553. It remained under the E. empire till 572, became a duchy in the beginning of the 8th century, and capital of the kingdom of Naples in 1139, under Norman rule. It was a hone of contention botween the houses of Anjou and Aragon, which gave rise to important movements in European history from the 13th to the 16th centuries. Its history is closely knit centuries. Its history is considered with that of Sicily (the two kingdoms being finally united in 1504), until being finally united in 1861. See A. both were absorbed in 1861, See A. Norway, Naples, Past and Present, 1901; C. E. Clement, Naples, the City of Parthenope, and its Environs, 1894; E. Lemonon, Naples, 1910. See Gari-BALDI.

Naples, Bay of, a fine deep semicircular sweep of some 50 m. from the Isle of Ischia round to that of Capri, with a low promontory to the N., a mountainous one to the S., while Vesuvius completes, within the bay, a view world famous for its heauty.

Napoleon, a French gold coin of the value of twenty francs (16s. English money), with a portrait of Napoleon stamped upon it.

Napoleon I. (Bonaparte) (1769-1821), emperor of the French, was born at Ajaceio, in Corsica, on Ang. 15. The date of his hirth has heen the subject of some considerable dispute, hut from actual quotation from the diary of his father we are now able to definitely fix it as (For details of his given abovc. family, see Bonaparte.) The early life and characteristics of the boy marked him out for a military eareer. His father, who had at first supported the Paolists, was now on good terms with the French governors, and was able to obtain for N. a place at the

Farnese collections, large numbers of Brienne. Here be was entered as a Roman and early Italian antiquities. There are many libraries, including far from being the happiest of his life, that of the Club Alpino. The marino in its moroscness and its sullenness. It was the greatest grief of his schoolhoy life that every one around him was of the conquering race, because deep down in N. was the feeling that the Corsicans would ultimately win their freedom, and he had the Corsican cause at heart. He did not show any very striking ability, but was proficient in mathematics and steady particular, he spent a good deal of his time in reading history. In 1784 he proceeded as a cadet to the military school at the military school at the military school at the school at t he proceeded as a cadet to the military school at Paris, and here he studied with greater zest, since he wished to enter the artillery and was anxious for the arrival of the time when he should be able to commence the rebuilding of the family fortunes. In 1785 he was gazetted to a regiment of artillery at Valence, and in the January of the following year he commenced his duties as a lieutenant. The death of his father had left him practically the head of the family and during the years which followed the beginning of his military career, he spent all his furloughs in Corsica, and was also always planning how the fortunes of the family might be most easily and quickly repaired. It is necessary to notice here that it was not until 1793 that N, turned from Corsica to seek his career in the wider sphere, France. In 1792 he returned from Corsica to Paris, having ex-ceeded his furlough by some four months and having taken an active part in the Paolist movements in Corsica, but the breach between himself and Paoli quickly widened after this, and trusting to the disturbed stato of France, he returned there to pursuo his fortunes further. His judgment of the state of Paris had not been wrong. Although by his absence he had forfeited his position, yet the revolutionary party could not afford to lose its trained officers, and so N. was reinstated with the rank of captain and also received arrears of pay, In the following year the success of Paoli and the occupation of Corsica hy the English drove the Bonapartes from the island, and henceforth N. regards France as the country that is to further his interests and in which the family fortunes are to be restored. In 1793 the fortunes of the republic were very low indeed. In addition to wars with hostile external powers, France had also to fight against powers within. The royalists at powers within. The royalists at Toulon had admitted the English and the Spaniards, and N. was called in to

help the besieging forces. Here he at | least laid the foundations of the greatness he soon was to be able to He introduced new methods of artillery attack, methods which were peculiarly Napoleonic in use, even if not in invention, and ultimately he was in a great part responsible for the withdrawal of the hostile fleets and the recapture of the town. A number of his present with N.

The immediate , however, do not seem to earry out the however, do not seem to carry out the prediction that N.'s greatness was founded at Toulon. He was, it is true, made a general of a brigade at the end of 1793, and appointed to the command of the artillery of the army of Italy in the following year, but he also suffered arrest, and was only released but the very great influence. leased by the very great influence which was brought to bear on his behalf. In 1794 he joined the French army in Italy, and was able to make some acquaintance with the country in which ho was first to command an In the same year he was arrested and charged by the revolutionaries of 1794, but was released again owing to the influence which he could bring to bear. In the following year he was ordered to the army of La Vendéo, but did not go, on the score of ill health. He, however, went to Paris, where for a short time he watched affairs. In the September of the same year, having asked for permission to go to Turkey, his name was struck off the list of officers emhis opportunity came, on this occa-sion from the very difficulties of the government themselves. The populace of Paris, stung to indignation by the work and methods of the Convention, determined to put an end to it. The Convention, liable to bo attacked at any moment by the National entrusted their defence to General Barras, and he chose as one of his chief subordinates the lately disgraced general, N. The famous Oet. 5, 1795, can really be taken as the first step in the rise of N. to the ~nded enn all and

the. famous ' whilf of grapeshot ' prepared empire in 1801. The immediate result of the crushing of this rising was the imposition of a new constitution, the First Directory, which was still, however, essentially democratle, but which prepared the way for the nitlemate changes which led to the foundation of the empire. In Jan. 1796 N. received the command of Italy, and in the same year he married Joseph were beginning to look up again, any-

motion he owed a good deal to Joséphine cannot be doubted, although it is true that his plans for the Italian eampaign had been accepted by the Directory. The opening of the Italian campaign marks a new cra in the history of the republic. Hitherto the wars had been fought by the Hitherto French for what they considered were the principles of the revolution; now all that was to eease, and the armies were given a somewhat natural interest in the campaigns which they were fighting by the hope of gaining spoil and plunder. Further. strengthened his position at the capital by the huge sums of money and priceless gifts which he despatched to the capital, and which he demanded not as plunder but as the natural spoils of the conqueror. His Italian campaign is also in many respects his most brilliant. It was noted for the dashing energy, the untiring manner in which all attacks were carried Further, everything was nicely planned, nothing was left to mere chanco; the two main features of the whole campaign may be taken as being rapidity and acouracy. He certainly fostered a spirit of revolution in the northern Italian states: that spirit was to help him in his campaigns, and later in the war, when paigns, and fater in the war, when threatened by an overwhelming Austrian army, he was able to depend upon an Italian legion. Slowly but surely he drove back the Austrians and Piedmontese. From the neighbourhood of Savona he drove them slowly back across the Adda, and finally, after the victory at Arcola, across the line of the Adige. The parthern Italian states formed the northern Italian states formed the Cisalpine Republic, the Austrians were hopelessly defeated. During the whole of this period N, was the servant of the Directory, but as has already been pointed out, the spoils of Italy gave France and the Directory a new idea of warfare, a warfare that paid for itself and had enough left to supply magnificent presents to the republic, and in proportion to the plunder so did the fuvour of N. grow. He was able to a very great extent to act independently of the Directory, to make his own terms, to set up his own forms of government, to depose, the way for the restoration of the and to treat with the princes of the lands conquered.

his ever vic-N., together with ' is war with

Anstrians waited. But the Directory men of the state. Yet for a moment called upon N. again, and he, piqued he hesitated, and his actual coup oalled upon N. again, and he, piqued by an attack made on him by the conneil, and only too ready to do anything to further his power, came The to the help of the Directory. Tuileries were surrounded, the obnoxious representatives were arrested. the power of the Directory was saved. N. had strengthened his own position, and had gone one step further to-wards empire. The Austrians no longer held back, the treaty of Campo Formio was signed, Lombardy was added to the Cisalpine Republic, N. could now pursue the plans which he had ever had of a campaign in the East. Almost immediately after the signing of the treaty, N. returned to So clearly had he shown his power that the Directory was con-cerned with one thing only, and that was to get him away as soon as possible. He was placed in command of sible. He was placed in command of the army of England, but he himself had resolved to go to Egypt. Why he was so intent on Egypt does not seem to be altogether clear, but forms one of those mystorious glimpses of N. the visionary. However, the Directory fell in with his plans, and he embarked his army of England for Egypt. He just escaped Nelson in the Mediterranean, captured Malta, then in the nessession of the Knights of St. in the possession of the Knights of St. in the possession of the Knights of St.
John, and sailed to Aboukir Bay.
Swiftly he landed his troops, the
terror of Nelson still on lum, and
marched against the Mamelukes,
whom he defeated. Then came the
news of the battle of the Nic, and he
determined to attempt an invasion of
Syria—whether he actually contemplated an attempted invasion of
India, in imitation of Alexander the
Great, will never he exactly known— Great, will never be exactly known—and to return to Europe via the territories of the sultan. His campaign in Syria was successful until he reached Syria was successful than he results. Acre; this, chiefly owing to Sir Sidney Smith, he failed to take, and thence he returned to Egypt. Here news of the republic greeted him, and leaving the army in the command of Kleber, he sailed for France, landing there some six weeks later. The news from France was not, from the point of view of France, encouraging. The war in Enrope was gradually going against the French, the work of the Italian campaign of N. had been wellnigh undone by the second coali-tion, the Directory was tottering to its fall, it was necessary that some drastic steps should be taken. Sieves meditated drastic steps, and on N.'s return he allied himself with him, N.'s journey to Paris had been one of complete trinmph. He was popular, and

thing might happen; therefore the he was fawned upon by all the chief d'état would probably have failed had it not been for his brother Lucien, the president of the conneil. who kept the plot in view even when N. had been unnerved, and brought the soldiers to his aid. The constituthe soldiers to his aid. The constitu-tion perished, even as it had sprung into existence, by the sword. The new constitution gave the power into the hands of three consuls, the first consul, N., being the head of the state, with practically all the power, the other two (Cambacener and Lebrun) being practically ciphers.

N. was now the ruler of France: this was the third step in the direction of empire. The popular feeling was on his side. Liberty was to be restored, the days of the old republic were to be revived. The insurrections in the country were immediately put down, overtures of peace held out to Austria and England; the first impression was to be a N. aiming at peace for his country, not universal empire. Now he determined upon a campaign which should bring glory to his name, and in that way add to the seenrity of his tenure of power. The campaign against the Austrians ended with the battle of Marengo, that battle in which the Austrians, after gaining practical victory, lost owing to the magnificent eavalry charges of Kellerman; Hohenlinden, a victory of Moreau, followed. Then came tho treaties of Lunéville (1801) and treates of Luneville (1801) and Amiens (1802), and also the concordat with Rome. The period between the election of N. as First Consul and his election as First Consul for life is the period during which practically the whole of the old civil institutions of France were restored. N. had established his power in France by practically diotating peace to the world; now he was to become the sole ruler of France. In Aug. 1802, as a reward for the peace, N. was created First Consul for life; from that moment, the object of peace having been ac-complished, N. was again anxious for war. Whr almost at any price. His aggressions in Europe soon led to the resumption of hostilities with England, and he thereupon seized Hanover and prepared the way for the policy of aggression which he was about to adopt towards Germany. In about to adopt toward Germany. In 1804 he caused himself to be declared emperor of the French, a position for which he had long been preparing the way, and which, having got rid of all possible dangers, he now thought fit to assume. His gigantic preparations for the invasion of England ceased with the battle of Trafalgar (1806),

ed in

but his policy of aggression had made | reached Vilna; he hesitated and then before Trafalgar, only to shake Europe by his land victories against Austria and Russia. Violating the neutrality of Prussia, he overwhelmed the Austrians at Ulm and marched into Vienna (1805). The Russians, impatient of delay and not waiting for reinforcements from their allies, were struck down at Austerlitz (1805). These two blows killed Pitt, established the empire of N., overthirew the ancient Holy Roman Empire, and established the Confederacy of the Rhine under Napoleonic influence. Peace negotiations were entered into and failed. Prussia, stung by her contemptuous treatment by N., appealed to arms, and was flung down, crushed and disheartened by the terrible blows of Jena and Aucrstadt. Eylau and Friedland, battles fought against Russia, for the moment - reace

and until the end was in sight. The continental system by which Napoleon sought to conquer Britain was in full force; he himself was the dictator of Europe, the conqueror of the Hapsburgs, tho oqual of the ancient line of emperors; his star had indeed reached its highest point. From this point the downfall of N. can practically be traced. In it there are practically three steps. First, the attempted annexation of First, the attempted annexation of Spain; secondly, the invasion of Russia; thirdly, the rising of the powers of Germany against him. In 1808 le forced the abdication of the Spanish king, and placed his brother Joseph on the Spanish throne. This led to war with Spain, a war in which the national spirit of the Spaniards was alded by the arms of England, and which for the rest of the period occupied a fair proportion of the occupied a fair proportion of the French troops. War had again broken out with Austria, but Prussia was still kept down by the power of Russia. Austria was defeated at Ratishon and then at Wagram, and in 1809 peace was again signed. But Russia was offended by the terms of the peaco, and this later caused considerable trouble. In April 1810 N. married the Archduchess Maria of Austria, and a son was born in the following year, to whom the title of King of Romo was given. The

possible another coalition, and he went on. He defeated the Russians struck his camp at Boulogne, just at Smolensk; again he hesitated, yet again he went on and reached Moscow, where he stayed until October, the town being in the meantime burned by the Russians. Then he determined on the terrible retreat frem Moscow, and although the retreat was actually carried out, five-sixths of the army he had taken with him had perished. The noxt move was the practical coalition of all nations against N. Russia and Prussia, then most of the German states, and finally Austria, fell into line. The allies, with their half a million men, now turned to face Napolcon, whose army was in a very discouraged state. The allies held their own, now inflicting a defeat, now sustaining one, until came the great contest at Leipzig which orushed N. and drove him back across orushed N. and drove him hack acress the Rhine. The Rhine Confederacy was dissolved, N.'s star had lowered still more in the horizon. The negotiations for peace which were opened almost immediately after this falled, and the allies invaded France. In spite of a contest full of genius, in spite of many victories, slowly but surely N. was driven back, and the allies closed round Parls. The Austrians Russians, and Prussians wore trians, Russians, and Prussians wore all advancing and closing round

sovereignty of that island, and the Bourbons, in the person of Louis XVIII., were restored to the throne of France. But the long wars had left Europe in a very unsettled state, and the name N. was still one to conjure with, so that in Fcb. 1815 N. again decided to try and revivo his fortunes in France and Europe. Ho was cnthuslastically received in France, the thuslastically received in France, the Bourbons were driven out; Europe declared war against him, but only Prussla and England were ready to meet him. N. determined to strike and to strike quickly, to separate the armies and defeat them thus in actain. He defeated Blucher at Ligny, but Blucher had a proviously arranged plaa with Wellington, and while Wellington fell back on Waterloo, Blucher pushed on to come up with him as soon as possible, and Grouchy, despatched by N. to keop Blucher back, fought only with the rearguard of the Prussian army. Wellington armies and defeat them thus in detail. pursnance of his continental policy of the Prussian army. Wellington towards England still further aggralied Russia, and in 1812 N. decided arrival of the Prussians swopt the to invado that country. His star was indeed setting; the N. of the Russian headlong rout. N. fied to Parls, where campaign was not the N. of the early days of the century. His army attempted to escape and get to the

U.S.A., but finding this impossible, on July 15 he surrendered to Capt. finally, in Dec. 1851, he dissolved Maitland of the Bellerophon at Rochetort. He was sent to St. Helena, about his famous but violontly bloody where he spent the rest of his life in exile, dying there on May 21, 1821, to acquiesce; he was in the same of cancer in the stomach. Sec Life month proposed as candidate for ten was a president and elected to the by Lockhart

Napoleon II. (1811-32), the son of

of Rome by his father.

third son of Louis Bonaparto, who was created by his brother king of Holland. His mother was Hortense Beauharnais, the step-daughter of the Emperor Napoleon. He was of Arenenburg, his mother's residence in Switzerland, and was given a very sound education. He was something of a seiontist and an engineer, and he also studied a good deal of history. In 1831 he took part in one of the

the first Napoleon's only son, the Duke of Reichstadt, he hecame the head of the family, hoth his elder brothers heing dead. During the next few years he published a good deal of literature, dealing principally with his political ideas. During the reign of Louis Philippe, and taking advantage of the disturbed state of France, he made two attempts to establish he made two attempts to establish himself in that country. The first, in 1836, was easily repressed, and he was deported to America; the second, in 1840, when he landed at Boulogne, ended in his being condemned to life-long imprisonment in a French for-tress. There accontinued his writings, and added to his already large output of Bonapartist literature. After just over five years' imprisonment he managed to make his escape, and returned to London. Taking advantage of the revolution of 1848, ho hurried back to France, where he had been elected as a deputy on the Con-

oath of allegiance to the republic, here nearly two years later, soon showed his hand. He rapidly Napoleon, Eugène Louis (1856-79), assumed the control of the army, only son of Napoleon III., see practically every post of importance BONAPARTE.

years as president and elected to the position by a majority of 7,000.000. Napoleon I. hy his marriage with He now made no pretence at dis-Maria Louise of Austria. He was guising his reactionary measures, created Duke of Reichstadt and King | Posing as the candidate and represcntative of the prople, he rapidly developed into a despot, who gagged Napoleon 11I. (Charles Louis Na- developed into a despot, who gagged poleon Bonaparte) (1808-73) was the the press and did bis best to repress liberty. In 1853 he married the Countess Eugenie de Montigo. still continued to pretend himself the Beauharnais, the step-daughter of friend of democracy, but his inter-the Emperor Napoleon. He was ference in Italian affairs led to the brought up principally at the castle annexation of Nice and Savoy to of Arenenburg, his mother's residence France, whilst his attempt to impose a monarch on the Mexicans lcd to one of the most pathetic tragedies that the world has witnessed. His foreign policy at times appears hrilliant, and ho was almost always in close alliance with Great Britain, e.g. during the Crimean War. But he realised, probably in a greater degree towards the end of the reign, the necessity for turning the minds of Frenchmen toturning the minds of Frenchmen towards foreign conquest. By 1865 it became apparent that his influence was on the wane. The book which he had written for the purpose of extolling his own methods of government did not meet with absolute, unalloyed success, and he realised that a more liberal policy was necessary. This he tried to adopt, but too late. In 1870, realising that his main support, the army, was heeringing to fall away in army, was beginning to fall away in its allegiance, he made a last attempt to rally them. He interfered in the question of the Spanish succession, for which a prince of the house of Hohenzollern was a candidate, and withdrew although the Prussians their prince, events led on to declara-tion of war. N. was unaware of the awful state of his army. When he declared war he was firmly convinced that the French would easily gain Berlin, but his nearly 300,000 men were opposed by 500,000 Prussians, elected as a deputy on the Constituent Assembly. Having taken his stat he almost seat he almost of the Rhine. He was crushed at but was again constituencies.

determined to determined to be a majority of some five to one over his opponent, General Cavaignac. At prisoner until the end of the war. In the three seemed to be some possibility of concord in France, but the president, altbough ho had taken the oratio of allegiance to tho republic. 1871 she was joined by N., who died oath of allegiance to tho republic.

Napoleon. Prince Lucien (1775 - 1)1840), see Bonaparte.

Napoleona Imperialis, see Belvisia. Napoleon-Vendée, see LA ROCHE-SUR-YON.

Napoli di Romania, see NAUPLIA.

Nara, a tn. of Hondo, Japan, 251 m. from Osaka by rail. It has ancient temples and several shrines and relics of great age. Toys and fans are Pop. 32,732. manufactured.

Naraingani, a tn. in the Dacca dist. of Bengal, India, ou the Lukhmia R., 10 m. S. of Dacea. It exports jute. Pop. 24,472.

Narandera, a municipal tn. of New South Wales, Australia, on the Murrumbidgee R., 280 m. S.W. of Sydney. Has various manufs. Pop. 2300.

Narasinha, in Hindu mythology, the fourth avatar of Vishnu, the reincarnation of the god in the form of man in order to put to death Hiranya-Kacipan, king of the Daityas, who was oppressing maukind.

Narayanpet, a tn. in the state of Haidarabad, India, 70 m. S.W. of the city of Haidarabad, Pop. 12,000.

Narbacan, or Narvacan, a pueblo of Luzon, Philippine Is., near the W. coast of the prov. of Ilocos. Pop.

16,500. Narbada, or Nerbudda, a riv. of India, rising in the Central Provinces, flowing in a generally W.S.W. direction till it falls into the Gulf of Cambay, 28 m. W. of Broach. Length 750 m. Area of basin 39,260 sq. m. Navigation is impeded by recks and stablery.

shallows. Narberth, a market tn. of Pembrokeshire, Wales, 10 m. E. of Haverford-There are the ruins of a Normau eastle in the ucighbourhood, stone

quarries and mines. Pop. (1911)1105. Narbonne, a city in the dept. of Aude, France, 37 m. E. of Carcassonne. It is connected with the Mediterranean at La Nouvello, 13 m. distant, by the Canal du Midi. It had a notable cathedral, now the church of St. Just, begun in 1272, and con-nected by a ruined cloister with the archiepiscopal palace, now used as a museum of art and archeology. It has a large trade in red wine and spirits, and a celebrated white heather honey. There are distilleries, tanneries, potteries, and manufactures of verdigris, bricks, and tiles. Pop. 23,289.

Narbrough, Sir John (1640-88), an English admiral, born in Norfolkshire. In 1670 he conducted an expedition through the Straits of Magellan, and three years later was made rear-admiral and knighted. In 1674 and Tripolitan plrate ships. His last | yellow.

expedition was that to the W. Indies in 1687, and it was while superintending the recovery of a treasure ship (off St. Domingo) that he was attacked by fever and died.

Narceia, or Narceine (CaHanNO.), a sonniferous poison prepared from opium bases. Practically insoluble in cold water, soluble in alcohol and hot water, insoluble in ether. Yields narceie acid on oxidation with petassium permanganate. It is decom-posed by the stronger and concen-It is decomtrated aoids. Formula differs from narcotine in containing four more equivalents of water.

Narcissus, a youth in Greck mythology famons for his beauty. He was beloved by many, including the nymph Echo (q.v.), but rejecting all their advances was punished by the gods, who caused him to pine away for love of his own image, which he saw reflected in a pool. He was changed into the flower which hears

his name.

Narcissus, a genus of hardy hulhous plants (order Amaryllidaece), and including some of the most beautiful garden flowers. Their production is, in itself, a considerable industry, and single hulbs of new and specially attractive varieties sell for £5 to £20 a bulb, and even more. The varieties a buil, and even more. The varieties of the various species are so numerous that they have been classified into three sections or groups: (1) Magnicoronati (trumpet daffodils), (2) Medio-coronati (star N.), (3) Parvicoronati (poet's N.). The first group is typified by N. pseudo-narcissus, the common daffodil or Lent lily, the only British representative of the genus. In this section, the corona is tunnel-shaped or cylindrical, as long as, or longer, than the periantb segments. It includes N. bulbocodium, the hoop petticent daffedil. The second section has the corona cup-shaped about half as long as tho perianth segments. In this are included N. incomparabilis, the challec-cup daffodil, N. triandus, angol's tears; and N. juncifolius, the rush-leaved daffodil. The tbird section havo the corolla small or saucershaped, and includes N. poeticus, the poet's N.; N. tazetta, the polyanthus N.; and N. jonquilla, the jonquil Speaking generally, the cultivation of Ns. is simple. The bulbs do best in a good loamy soil free from fresh animal manure, and the earlier they are planted the botter. A general rule in planting is to set the bulbs about one and a half times their length deep in the soll. Many Na. he commanded another expedition to bear forcing well, and bloom can be the Mediterranean, and was success-had from November. N. bulbs should ful in destroying several Algerian not be lifted till the leaves are quite

Narcissus Fly, or Merodon equestris, a dipterous fly, giving rise to larves which do very serious damage to narcissus bulbs. It appears botween May and July, and lays its eggs between the leaves and on the ground, eventually becoming organ and the resulting larves bore into the bulbs and feed upon them until they oversit and composer to the bulbs and feed upon them until they are eaten out. The fly is somewhat like a bee, about 1 in. long and with variable stripes of red, yellow, or white, and with a black band across the theory but is distinguished by the thorax, but is distinguished by its two-winged character and the absence of the long black antennæ found in all bees. The flics are best eaught with a not when they settle for egg-laying, or can be trapped with saucers of treacle or honey. Newly bought bulbs should be carefully examined, and sickliness in plants investigated, so that all mi-fested bulbs can be lifted and de-stroyed. The occurrence of the pest must be notified to the Board of Agriculture.

Narcotics are drugs which produce stupor if the dose is increased beyond a certain limit. The most important member and the type N. is opium. The alkalolds obtained from opium, alcohol, belladonna, henbane, Indiau

re poisonous power of in-

duoing sleep, some are 'hypnoties' or 'soporifies' sulphonal), while others called (e.g. which alleviate pain are called anodynes

(e.g. antipyrin).
Narcotine (C₂₇H₂₇NO₂), an alkaloid occurring in opium. Discovered in 1803, and thought to be the stimulating principle of oplum, but it has really little activity as a narcotic. It is nearly insoluble in water, sparingly so in alcohol, and readily soluble in chloroform and ether. It has slightly alkaline properties, is a derivative of benzyl-isoquinoline, and has a large number of decomposition products, of which 'vanilliu' is well known as the flavouring principle of vanilla. Its salts are not readily crystallisable, are more bitter than morphia, and its sulphate is used instead of quiuine

in India. Nard aud Nardostachys, sec SPIKENARD.

Nardi, Jacopo (1476 - c. 1555), an Italian historian, born at Florence. He first served in the army, and afterwards held a civil office in Florence. In 1527 he was sent as an ambassador to Venice. His work entitled Storia della Città di Firenze dell' anno, 1494-1531, published in 1582 (and a second edition in 1584), formes a reguel to the of Machievelle. forms a sequel to that of Machiavelli.

Pop.

Nares, James (1715-83), a com-poser, born at Stanwell, Middlesex. He studied music under Dr. Pepusch, eventually becoming organist of York Cathedral. In 1756 be became organist and composer to the king, and at about the same time received his degree as Mus. Doe. at Cambridge. In the following year he was appointed master of the choristers of the Chapel His compositions, mostly Royal. church music, include a number of anthems.

Nariad, or Nadiad, a tn. of Bombay, India, 30 m. N.N.E of Cambay; has a large trade in tobacco and ghee.

Pop. 32,000.

Narni, a tn. and episcopal sec. prov. of Perugia, Italy, 65 m. N. of Rome. It has a 13th century cathedral, and was a bishop's see for 1500 years. There are mineral springs near, and many Roman remains. Pop. 13,000. Narrabri, a tn. of New South Wales, Australia, 270 m. N.W. of Sydney.

Pop. 3000. Narragansett Bay, an inlet on the S.E. of Rhode Is., U.S.A. It is nearly 28 m. long and 3 to 12 m. wide. It cncloses a number of islands, the largest of which is Rhode Is.

RHODE ISLAND.

Narragansett Indians, a nearly extinct tribe of Algonquin stock, who formerly roamed Rhode Is, and the W. shores of Narragansett Bay. They manifested friendliness for the ori-ginal settlers of Rhode Is, but later became hostile, and were defeated by the English governor, Winslow, in 1675.

Narragansett Pier, a summer resort, 9 m. W. of Newport, Rhode Is.,

U.S.A. Pop. (1910) 1250.
Narrows, The, a channel of U.S.A., 8 m. S. of New York, between Long Is. on the E. and Staten Is. on the W. It forms one of the principal entrances to New York harbour. Narses (c. 472-568 a.D.), a cele-

brated general and statesman of the Hc was Byzantine empire. Armenian by birth. In 538 he was sent to Italy to ac' in council with Belisarius against the Goths. quarrelled with the general and was quarrelled with the general and was recalled in 539, but on the recall of Belisarius in 552, N. was appointed to command in Italy, and at a fierce engagement at Tagina defeated the Goths and killed their king, Totila. In 553 he defeated Teja near Sorrento and took Rome. He was made exarch of Italy and fixed his court at Ravenna, and until the death of Instinian in 565 administered the Instinian in 565, administered the affairs of Italy with ability and Nardo, a tn. of Italy, prov. of vigour. At the accession of Justin he Leece, 24 m. W. of Otranto. It has was accused of avarice and extortion

and dismissed. After this he was duke and prime minister 1844-46; accused of intriguing with Alboin, ambassador at Paris, 1847; head of King of the Lombards, for a new invasion of Italy, but his share was 1864-65. With O'Donnell he suppressed a great military revolt at 1866 before the Lombard invasion. See Gibbon, Decline and Fall (ed. 1896-1900). See also Gotts and Varvik, or Viotoriahavn, a scaport of Norway, on the Ofoten Fjord. It Narsinghpur: 1. The cap. of a lowes its rise to the construction of the same pame in Central Ofoten railway, completed 1903, and

Narsinghpur: 1. The cap. of a dist. of the same name, in Central Provinces, India, 50 m. W.S.W. of Jabalpur. It is the seat of the cotton and grain trade of the Narbada Valley. Pop. 12,000. 2. The district occupies the upper part of the Narbada Valley, where extensive grain crops are raised. Coal is mined in the district (at Mohpani), and there are manufs. of hrass work, iron ware, cotton, and silk. The Great Indian Peninsula Railway traverses which has an area district, 1977 sq. m. and a pop. of 315,000.

Narthex, a colonnade outside the western doors of basilican and certain other ohurches. In early times It formed part of the atrium, but on the disappearance of this feature it frequently remained. It was the place for the penitents who were not allowed to enter the church itself.

Narva, or Ivan Gorod, a seaport and fortress of Russia, on the R. Narova, in the gov. of St. Petersburg, aud 90 m. V.S.W. of St. Petersburg etty. It was founded in 1256. Its fortress, Ivan Gorod, was abandoned in 1864. There is a cathedral and an old town hall (1683). The falls of the river afford water proper for drighter paper. afford water-power for driving paper, cotton, woollen, and linen mills and steam flour mills. Pop. 18,000.

Narvaez, Panfilo de (c. 1480-1528), a

Spanish soldler, born at Valladolid. He went to America, and from 1512 was under Velasquez in command of an auxiliary force in the conquest of Cuha. In 1520 he was sent to super-sede and punish Cortes, but was defeated at Cempoala and deserted by his army. Having returned to Spain he was appointed governor of Florida In 1526, but was drowned in 1528 in the Gulf of Mexico.

Narvaez, Ramon Maria, Duke of Valencia (1800-68), a Spanish general and statesman, born at Loja. Spain. N. entered the army in 1815; sunported the Constitutional party, 1822-23; served against the Carlists, 1834; completely defeated Gomez at Majaceite, Nov. 1836; opposed Espartero, and was obliged to flee to France about 1839, where he was afterwards joined by Queen Christina. He started a revolution in her favour and entered Madrid, 1843; the same | Nash, John (1752-1835), an archivern he declared the majority of tect, born at Cardigan in Wales. He shelln II, and became lieutenant-is chiofly famous for his street imgeneral of Spain. He was created provements in London. He planned

Ofoten railway, completed 1903, and is the port for the shipping of iron ore.

Pop. 5000. Narwhal, or Sea Unicorn (Monodon monoceros), a cetacean, allied to the dolphins and porpoises. The male has one-almost invariably the leftof the teeth or tusks in the upper jaw extraordinarily doveloped into a spirally furrowed horn of pure ivory from 6 to 10 ft. long. This is the longest tooth found in the Mammalia. The adult animal is from 10 to 16 ft. long. It has a grey back, mottled with black, the under parts being much lighter, but also spotted. It has a blunt short head, no dorsal fin and very small flippers, but is very active and a rapid swimmer. It is peculiar to the Arctic Ocean, though it occasionally strays as far S. as British seas. The oil is valuable and the flesh edible.

Narynsk, a tn. and fort of Russian Central Asia, on the R. Naryn, 88 m. from the Russo-Chinese frontier. commands the route, through Torckti Pass, between Russian Central Asla and Kashgar.

Nascent State. Gases in the free stato usually consist of molecules containing two or more atoms. These atoms are held together by a force of attraction which, it is natural to snppose, must be overcome before chenilcal action can be offected. So it would be supposed that gases, which have just been liberated from combination and before the atoms have had time to combino into molecules, would be more chemically active than after combination into molecules. This is found to be so, and chemists use the term 'nascent state' to define the condition of substances which so act at the instant of their liberation from combination. Ordinary nitrogen will not unite with hydrogen, but if a solution of a compound of ultrogen be poured into a flask in which hydrogen is being generated, then ammonia will be formed.

Naseby, a par, and vil. of Northamp-tonshire, England, 7 m. S.S.W. of Market Harborough. Near here Cromwell defeated Charles I. and Prince

Rupert in 1645.

repaired and which his entrance gateway, known

as the Marhle Arch, was removed to Cumherland Gate, Hyde Park; laid out Regent's Park, and designed the terraces along the edge of the park. The Brighton Pavilion is also a speci-

men of his work.

Nash, Richard, or 'Beau Nash' (1674-1762), born at Swansea. He made his living by gambling, and was noted for his extravagance. In 1705 he went to Bath, where he established the Assembly Rooms and hecame the recognised autocrat of the town, and was admired for his manners and taste. He was also mainly instru-mental, with Ralph Allen and Dr. Oliver, in establishing the mineral-water hospital at Bath. See *Life* by Goldsmith (1762).

Goldsmill (1702).

Nash, Thomas (1567 - 1601), an anthor, horn at Lowestoft. His first publication was an acrid review of recent literature profixed to Greene's Affine which he discussed at Menaphon, which he discussed at I Absurdi-

s engaged

time, but in 1792 published Pierce Pennilesse, his Supplication to the Divell as a reply to the savago denunciations of Richard Harvey. These were followed by Christ's Tears wer Jerusalem, Strange News; The Terrors of the Night, notable for the praise of Daniel's 'Delia'; and The Unfortunate Traveller, or the Life of Jack Wilton, the best novel of adventure in England before Defoe. Besides these he published Have with you to Saffron Walden, 1596, an onslaught on Gahriel Harvey; The Isle of Dogs, a comedy in which he attacked the current abuses in the state, and for which he suffered imprison-These were followed by Christ's Tears and for which he suffered imprisonment in the Flect: Lenten Stuffe. 1599, an amusing description of Yarmouth; and Summer's Last Will, a comedy (1600)

Nashua, a city of New Hampshire, co. scat of Hillsboro co., U.S.A., on the Merrimac R., 14½ m. from Manchester. There are manufs. of sheetings and shirtings, boots, shoes, and foundry and machino-shop products.

Pop. (1910) 26,005.

Nashville, the cap. of Tennessee, and co. seat of Davidson co., U.S.A., on the Cumberland R., 185 m. S.S.W. of Louisvillo. It is a great railway and commercial centre, with extensive trade in cotton and tobacco. and manufs. of cotton, flour, oil, paper, woollen goods, leather, etc. It is also woollen goods, leather, etc. It is also was occupied in teaching, and in the seat of many educational institutions, including Vanderbilt University, laces described in the Waverley Nashville University, Fisk University, novels. He was a member of the and Walden University (founded as original Society of Scottish Artists,

Pagent Street hat Carlton House | Central Tennessee College). Here in 1864 the Federals defeated the Confederates. N. was founded in 1780 incorporated as a tn. in 1784, chartered as a city in 1806, and made the cap. of the state in 1843. Pop. (1910) 110,364.

Nasik, a tn. and dist. in the central d'

Thet famo

age. In the vicinity are some ancient Buddhist caves. There are manufs. of cotton goods, brassware and copperware, and mineral waters. The dist. has an area of 5860 sq. in. Pop.

(tn.) 22,000; (dist.) 820,000. Nasirabad: 1. Or Nusseerabad, a tn. of Bengal, India, cap. of the Maimansingh dist., 74 m. N. of Dacca. The earthquake in 1897 dcstroyed the church and high school. stroyed the church and high school. Pop. 15,000. 2. A tn. of Bombay, India, in the dist. of Khandesh, 120 m. S.W. of Indore, noted for the manuf. of glass bangles. Pop. 13,000. 3. A tn. and cantonmont in the dist. of Ajmere, Rajputana, India. Pop. 23,000. 4. A tract of country in British. Baluchietan sequence from British Baluchistan, acquired from the Khan of Kelat in 1903 on payment of an annual sum of about £7300.

27300.

Nasir - ed - Deen - Mohammed - Ibn-Hassan (c. 1200 - c. 1276), a celebrated Persian astronomer, born at Toos in Khorassan, and was appointed superintendent of an observatory at Azerhaijan. He wrote the Itchanic Tables, somewhat resembling those of Ptolemy.

Nasmith, David (1799-1839), the originator of town and city missions, born at Glasgow. In 1813 he became secretary to the Glasgow Youths?

Bible Association and devoted him-

Bible Association and devoted himself to religious work, and from 1821-28 was assistant-secretary to no less than twenty-three charitable societies. He founded the Glasgow City Mission in 1826, the Local Missionary Society for Ircland, the London City Mission, and the British and Foreign Mission, besides about thirty-two in U.S. and Canada, and two more at Paris and Havre respectively.

Nasmyth, Alexander (1758-1840), a portrait and landscape painter, born in Edinburgh. He was pupil of Allan Ramsay. In 1778 he established himself in Edinburgh as a portrait painter, and had Robert Burns among his sitters. But having a preference for landscape painting, he ultimately confined himself to this branch, although much of his time

Nasmyth, James (1808-90), an engineer, the son of Alexander N., and brother of Patrick. In 1834 he started business for himself at Manchester, subsequently establishing the Bridgewater foundry at Patri-It was afterwards adopted by the Admiralty, N. having taken out a patent iu 1842. He also invented a nut-shaping machine, flexible shaft for driving small drills. and an hydraulic punching-machine; he was the first to observe, in 1860, a mottled appearance of the sun's surface called 'willow leaves' or rice grains.' He published: Remarks on Tools and Machinery, 1858, and on roots and Machinery, 1858, and The Moon considered as a Planet, a World, and a Satellite, in conjunction with James Carpenter. 1874. See Autobiography, ed. by Smiles, 1883. Nasmyth, Peter, commonly known as Patrick (1787-1831), a landscape painter, born in Edinburgh. His

His landscapes won for him the name of 'the English Hobbena.' The reputation of his works has greatly increased since his death, indeed, one was sold at Christles' for 1300 guineas was sold at Christies for 1300 gaineas; in 1892. Some of his paintings are: 'Haselmere,' 'Turner's Hill, East Grinstead,' 'Cottage in Hyde Park,' 'A Country Road,' 'A Cascade,' 'Sir Philip Sydney's Oak, Penshurst,' 'View of St. Albans.' He painted with his left hand.

Naso, a tn. of Sicily, 44 m. W. by

S. of Messina. Pop. 3000. Naso, see Ovid.

Nasratabad, or Huseinabad, the cap. Nastved, a tn. of Seeland, Denmark, of Selstan, Persia, 275 m. E.N.E. of about 14 m. N.W. of Prastö. Pop. Kerman.

Nassarawa: 1. A prov. of Northern Nigeria, situated on the northern bank of the R. Benue, with an area of 18,000 sq. m. Cotton is oxtensively grown, other products being rubber, palm kernels, and beni seed. Pop. 161,000. 2. Tn., cap. of the prov., 90 m. N.E. of Lokoja. Pop. 10,000. Nassau: 1. An independent duchy up to 1866. in which year, it was it.

productive, yielding corn, hemp, flax, pass of Lahig's Nek, which leads into tobacco, vegetables, and fruits, including grapes, from which the highly watered by the Tugela, Buffalo, Klip, esteemed Rhenish wines are made. Mool, and other rivers, which are

and an associate of the Royal In-stitution.

Nasmyth, James (1808-90), an the dukedom to Frederick William. Formerly New Providence. situated in the E. end of the island of New Providence. It is the chief town of the Bahamas, and has trade in pearls, fruit, salts, and sponges. Pop. 10,000.

Nassau or Danger Islands, a cluster of islets in the Union group, Polynesia

Pacific. Area 7 sq. m. Pop. 1050.
Nassau or Pagi Islands, are two islands belonging to the Mentawi chain, off the W. coast of Sumatra. They are of volcanie origin, and have an uregular surface, which is densely wooded. The chief products are cocoa-

nuts, sago, trepang, and timber. Nast, Thomas (1840-1902), an American caricaturist, born at Landau, Bavaria. In 1860 he was sent to England to draw for the Illustrated News the Heenan-Sayers prize fight, but it was his elever eartoons in Harper's Weekly which made him famous, and his purely political and personal caricatures (1871-73), when he attacked the Tweed Ring in New York city, creatly added to his reputation. In 1894 he became a member of the staff of the Pall Mall Gazette, and in 1902 was appointed United States consul at Guyaquil, where he died of yellow fever. published Nast's Almanac.

Nasturtium, a name wrongly but persistently given to the two garden species of Tropwolum, majus and minus (q.v.). The true N. is the common watereress (N. officinale) (q.v.).

7150. Natal, an original prov. of the Union of S. Africa, lies in the S.E. portion of the continent, and Is bounded on the E. by the Indian Ocean. It derives its name from its being discovered by the Portuguese on Christmas Day. The province has an estimated area of 35,371 sq. m. 90 m. N.E. of Lolsoja. Pop. 16,000.

Nassau: 1. An independent duelry up to 1866, in which year it was incorporated with Prussla and now forms part of the prov. of Hessenssau. Its former area was 1830 sq. m., and at the time of its incorporation had a pop. of 465,636. Tho Tannus Mts. rise in the S. to an olevation of 2750 ft. The Rhine, Main, and the Lahn are the chief rivers, but there are numerous small streams. of terraces from the low and sandy The hills are well-wooded, abounding in game, and the district is rich in minerals. There are numerous is Mont aux Sources (over 1,000 ft.). in minerals. There are numerons is Mont aux Sources (over 11,000 ft.). mineral springs, and the soil is very Majnba Mt. (7000 ft.) lies S.W. of the

useful for irrigation purposes, alalclimate is sub-tropical on the coast but somewhat colder inland. The winter begins in April and ends in September; the average number of rainy days being thirteen. In the summer season the thunder-storms aro very frequent and severe. The annual rainfall on the coath is about 32 in. Inland, it varies a good deal in different districts, and is greatest in summer. The S.E. is the prevailing wind in the summer months as in the Case of Coad Hope. Occasionally the Cape of Good Hope. Occasionally the strocce, or hot wind, from the N.W. is felt, which generally terminates in a thunder-storm. The leading crops for export are sugar, tea, maize, and wattle hark; other crops include lucerne, sweet potatoes, peas, pumpkins, and vegetables. Cotton cultivation has been recently introduced and is promising; tobacco is also grown. The province is rich in mineral wealth, and asbestos, copper ore, fireolay, gold, graphite, gypsum, iron ore, lead and silver ore, gypsult, no ref, lead and she're ref, uitre, oil shale, limestone, and marble, manganese ore, mica, nickei ore, and tin ore are found. Coal is mined in the Klip R., Vryheid, and Utrecht districts. The wild animals still found include the leopard, panther, jackai, hyena, wild out, hippopotamus, crocodlie, different species of antelope, but the larger animais are gradually disappearing. There are many varieties of snakes, including the python. The birds luclude the vulture, eagle, secretary-bird. parrot, flamingoes, many of them of brilliant plumage but mostly songless. The total revenue for 1910 was £4,293,737, and the expenditure £3,530,349. The total value of the exports, £3,916,475, and of the imports, £7,789,919.

The population of Durban, the

principal scaport of the province, is 72,512, including over 33,000 Europeans. Pietermaritzhurg (the seat of government) bas a population of 30,539, including about 15,000 Europeans. Ladysmith (q.v.), Dundee (2811), and Newcastle (2950) are other towns. Communication is easy; in 1912 the total railway mileage open was 1052, m., excluding the 24 m. from Van Reinen to Harrismith, and several new railways are in course of construction. At the end of 1909 there were 404 post-offices and agencies, 1996 m. of telegraph line, and 186 m. of telephone line. Since the formation of the Union, the statistics of N. have been included in those of the Union.

The total population for 1911 was

The total population for 1911 was 1,191,958, including 98,582 Europeans, 141,568 Indians and Asiatics, and 951,808 paties and 951,808 natives.

South Administration. — By the Africa Act, 1909, which constituted the Union of S. Africa, inaugurated in 1910 by the Duke of Connaught, N. sends cight members to the Union Senate and seventeen members to the House of Assembly. It has an elected Provincial Council of twenty-five momhers. These twenty-five clect four mombers to act with the administrator as the executive. administrator is chosen by the governor-general of the Union in Council. He holds office for five years. The govornment of Zululaud years. The government of zamuatum is in the hands of a provincial council and an administrator appointed by the governor-general. Its executive consists of four members. There is a native High Court in N. with five judges to deal with peculiarly native cases.

Education, with the exception of higher education, which comes under the control of the Union government, the control of the Umon government, comes under the provincial administration. There are in N. 2 government high schools, 2 preparatory schools, 2 technical institutes, 2 art schools, 58 primary schools, 5 Indian schools, 2 government schools for coloured children, 124 government-aided schools for European children, 30 Indian, 178 nativo, and 17 coloured schools twich received. 17 coloured schools which receive

government aid.

Defence.-In 1911 there was

volunteer cadet corps, numbering 150 senior cadets and 3580 sohool and the south Africa Defence Act of June 1912, every citizen hetween the ages of seventeen and sixty is liable to render personal service in time of war, and those between twenty-one and twenty-five are liable to undergo a proscribed peace training with the active citizen force.

Religion.—The Christian popula-tion consists of members of the Christian populabishopric in Catho-Preshyat. bcs terians, and Independents.

History.—The coast of N. was first sighted hy Vasco da Gama on Christmas Day, 1497, who, in consequence, named it N. (die Natali). An unsuccessful attempt of the Dutch to found a colony there was followed by a British attempt in 1824. The colony was, however, broken up in 1823 by Dingaan, King of the Amazulus. In 1835 Ding formed a

IX

In 1837 the Boers, trekking northward from Cape Colony, first entered N., and having crushed the Zulus at Blood R., December 1838, attempted to establish a republic. In 1843, however, the British government annexed N. to Cape Colony and the Boers moved westwards to the Transvaal. In 1856 N. was declared an independent colony. In 1879 Cetywayo. King of the Zulus, was defeated and captured, and in 1897 Zululand was annexed to N. In 1881 the Transvaal Boers invaded the country and defeated the British at Majuba Hill In the war of 1899-1902, N. (q.v.).was the scene of some of the fiercest

Vryheid, and part of Wakkerstroom were added to N. In 1906 there was a formidable Zulu rising along the Tugela R., which was suppressed with

which ended in (d. 1913). On

May 31, 1910, the colony of N. was merged into the Union of S. Africa, becoming an original province of the Union. Sce Brooks. Natal, 1887; Ingram, Natalia, 1897; Rowell. Natal and the Boers, 1900; R. Russell, Natal (6th ed.), 1900.

Natal, a tn. and senport of Brazii, cap. of the state of Rio Grande do Norte. Exports sugar and cotton. Pop. 14,000.

Natal, a British armoured cruiser. It was completed in 1907, and has a displacement of 13,550 tons, a length 480 ft., and a speed of about 231 knots.

Natal, Port. on the S.E. coast of Natal, 54 m. from Pietermaritzburg:

bas an important harbour.

Natalie (b. 1859), an ex-queen of Servia, and since her conversion to Roman Catholicism in 1902 has lived mainly at Biarritz, Parls, and Viennn. Sho was the wife of Milan I., from whom she was divorced, and the mother of Alexander I., whom she never forgave for his marriage with Draga Maschin. Sho received the news of the assassination of the king and queen in 1903 in Paris, and was thereafter forbiddon to re-enter Servia. Her Memoirs were published at Paris in 1891.

Natal Steamboat Line. The, estab-formed in 1861 to promote artillery lished in Londou in 1850 by A capitation King & Co. The headquarte

London, and the company in all thirteen ships.

Natanz, n prov. of Persia, between Ispahan and Kashan. Pop. 23,000. Natanz, the cap.. is 69 m. N. of Ispahan. Pop. 5000.

cap. of Adams co., Mississippl, Queen Victoria Street, E.C.

America, on the Mississippi, 145 m. (direct) N.N.W. of New Orleans. Cotton is the chief industry. Pop. (1910) 11,791.

Natchez, a tribe of N. American Indians, whose original territory extended along the Gulf of Mexico, between Mobile and the Mississippi. They were nearly exterminated by the French in 1730. The Natchez language is extinct.

Natick, a tn. of Massachusetts, U.S.A., in Middlesex co., 16 m. W.S.W. of Boston. Manufs. include boots and shoes, baseballs, and shirts.

Pop. (1910) 9866.

Nation, The, a British weekly paper published on Saturday; was founded in 1907 in succession to The Sneaker. founded in 1890. It is a political, critical, and literary organ, on progressive lines, special attention being given to modern movements, ligious, social, and artistic. In politics it follows the opinions of its pro-decessor, The Speaker, in supporting the extreme Radical wing of the Liberal party, in urging the need of social reform, and in criticising im-perialism. It is edited by Mr. H. W.

Massingham, and the offices are at 14 Henrictta Street, Covent Garden, W.C. National Anthems. Patriotic hymns sung at public ecremonics and ou similar occasions are of comparatively recent date. The British God Save the King assumed its present form about 1740-45, and by tradition has been attributed to Henry Carey (1692-1743), though it is possible that it developed out of an old folk song. The most important claimant to an early version of it is John Buli (1563-1628). The air has been adopted by Switzerland to the words, Rufst du, Switzerland to the words, Rufst dimenin Valerland; by Prussia to Heil dir im Siegerkranz; by Denmark to Heil dir, dem Liebenden; by Germany to Heil dir im Siegeskranz; and by the United States to My country! 'lis of thee. Other N. A. are the French Marsrillaise, by Rouget de Lisle(1792): Austrian Goll erhalle unsern Kaiser; Russian Boche Zaria chrany; United States, Hail Columbia, by Joseph Honkinson: Canada, The Manle Leaf Hopkinson; Canada, The Maple Leaf for ever, by Muir; and New Zealand, God girl her about with the Surges, by Reeves.

National Artillery Association, The,

government for

Association who goes through n certain course, and ammunition is provided for practice. The annual camp is at Shooburyness in September. The president of the Association is H.R.H. the Duke of Natchez, n port of ontry and the Communit; the offices are at

National Council of Evangelical Free the hest work of Raphacl, Correggio, Churches, the council of the Free and Paul Veronesc. Raphael's Church Federation, founded in 1892. Madonna degli Ansidel' was purthe Presbyterian Methodist, and

The Federation throughout Americ The National Cou

called the Bicycle Union, was formed in 1878, its objects being mainly (1) to govern the legislation of and arrange for races; (2) to obtain fair prices for transit of cycles by rnii; (3) to secure the best interests of the

To it are sent representatives from chased from the Duke of Marlborough the various bodies which form the in 1884 for £70,000, the largest sum Federation, among which are included ever given for a single picture. There

when necessary on behalf of the the time Veronese, 'The Family of federated churches.

National Cyclists' Union. An association of British cycle clubs, originally 1909 Holbein's 'Ducbess of Milan' was purchased for the nation from the Duke of Norfolk nt a cost of £50,000 by an anonymous benefactor. National Gallery of British Art, pre-sented to the nation by Sir Henry Tate, and opened in 1897, is controlled by the trustees of the National Gallery. The Scottish National Gallery at

roads by means of

National Debt, se National Defend Stringent precauti

where national secrets are hidden, such as torpedo buildings, mining buildings, magazines, dockyards, etc., to prevent unauthorised persons from gaining admission. It is thus only in exceptional circumstances that a non-British subject is allowed a pass into nuy defence works. Passes are issued to British subjects subject to conditious, and nn army or navy officer in uniform can enter any defence works, though not into the more secret portions of the buildings.

National Galleries, The. The National Gallery of London contains the most

larged in 1860, 1876, and 1886, stands on the N. side of Trafalgar Square. The nucleus of the gallery was the collection of thirty-eight Angerstein plctures purchased in 1824 at a cost of £57,000, which included seven Hogarths (Mariage à la Mode'), Wilkie's (Village Festival,' three Claudes, and Tittan's 'Venus and Adonis,' A considerable sum is voted annually by parliament for augmenting the number of pictures, and famous bequests include those of Beau-

mont (1826), C: Farnborough Joseph Turne Pcel (1871), a

necessary in the case of buildings house, 1895; and Addison's Art of the

National Gallery, 1905. National Guard, the name given to an armed force of citizens organised an armed over of chizens organised for local defence. The term 14 upplied particularly to the French garde bourgeoise, which was enrolled at the time of the Revolution. The National Assembly proclaimed in 1790 the principle of compulsory and universal control to which the deliversal control to the principle of compulsory and universal control to the principle of the principle o servico, to which all qualified citizens belonged, and membership of which was in most cases a necessary corollary of the full rights of eltizenship. Tho N. G. was abolished until 1872. Local forces in Spain Italy, etc., and

Local forces in Spain Italy, etc., nna organised militia in some parts of the U.S.A., and also called N. Gs.
National Insurance. The National Insurance Act, 1911, which became law on Dec. 16, 1911, and was put into operation on July 15, 1912, introduced for the first time in this country compulsory insurance. The full title of the Bill is 'An Act to provide for Insurance against Loss of Health and for the prevention and Cure of Sickness and for Insurance Unemployment against and purposes incidental thereto.' The measure, which was framed and intro-The duced by Mr. David Lloyd George, bas been the cause of much discussion and met with some considerable opposition in the country, and there can be no doubt that the difficulties attending its operations pro-The collection now numbers more sent a problem of considerable than 1650 pictures, 550 of which are magnitude. This will be the more at the Tate Gallery, London. The readily understood when it is congallery is particularly rich in early sidered that it provides for the comItalian masters, and contains some of pulsory insurance against sickness

portion of the population representing workers between the ages of sixteen seventy, whose earnings are under the income tax line of £160 a year, and the few manual workers earning more than that amount. The Act provides that every employed person between the ages mentioned ahove whose income does not exceed £160 a year, and every person earning more than that amount hy manual lahour, must be insured against sickness, the fund being contributory by the worker, the employer, and the state in varying proportions, more particularly dealt with later. There certain exceptions, notably soldiers and sailors, who are dealt with under a special scheme, pensionahic employees of the crown or of local authorities or of elementary schools, wives employed by their hushands, and husbands employed hy their wives, and crews of fishing vessels sharing profits. In addition those persons having an income of £26 or over, independent of personal exertions, are not compulsorly insured. Apart from these exceptions, however, practically all workers, manual or otherwise, who do not pay income tax are included in the great soheme of N. I. In the case of aliens, these are also lucluded, but the state does not contribute, and the benefits are accordingly reduced. The special scheme montioned as applying to tho army and navy cnables men to join an approved soelety within six months of the commencement of the Act, and in this way they can accumulate the reserve necessary to put them on an equal footing with other members on leaving the services. The contributions are collected and insurance made compulsory the through the employers, the worker's subscription being deducted from wages, and with the employer's own pald over in a lump sum to the Insurance Fund. The method adopted in this respect is the stamping of an insurance eard. This card, which is printed and published by the In-surance Commissioners, is obtained printed and pulnished by the Insurance Commissioners, is obtained by the lusured person either from the post office or the society in which he or she elects to become a member. It is then handed by the insured person to the employer, who at the timo of paying wages deducts the amount of the enhancing required affixing of the subscription required, affixing a stamp of the same value to the card, plus the amount of his own contribution. This card contains thirteen divisions for the thirteen

for some 14,000,000 of persons, that card may be legally kept in tho possession of the insured person, who will see that it is properly stamped as wages are paid, but for convenience it will be generally kept by the em-player until completion. The completed stamped eards will be sent to the State Insurance Office, as also the moncy realised by the sale of insurance stamps at the post office.

National

The required contributions are as follows: In respect of a man earning over 15s. a week, 7d., and a woman 6d. The man pays 4d. a week, the woman 3d., and for either man or woman the employer pays 3d. The state adds to these contributions in the form of the payment of a share of the eost of the henefits paid out, namely, two-ninths in the case of men and one-fourth in the case of women. This is estimated as equivalent to 2d. per weck for each man or woman. In cases where the wages do not exceed 15s. per week, the worker's contributions are reduced and those of the employer increased, as follows: Wages over 12s. and not over 15s., worker's contributions 3d., employer's 4d. for a man; wages over 9s., hut not over 12s., worker's contributions, either man or woman, 1d.; em ployer's contribution, 5d. for a man and 4d. for a woman. In the case of wages not over 9s., no contribution is payable by the worker, the compleyer paying 6d. for a man and 6d. for a woman. The rates of contribution for workers under twenty-one are uniform, the boy's subscription being 4d, for the worker and 3d, for the employer, and that of the girl, 3d. for the worker and 3d. for the employer. These rates of contribution are not applicable to Ireland, where they differ from the above. Should an employer clect to pay his workpeople their full wages for the first six weeks of sickness, contributions are required on a reduced scale. hut in taking advantage of this reduction the employer definitely hinds himself to pay the full six weeks wages in the case of slekness. At the expiration of the six weeks worker hecomes entitled to the ordinary henefits under the Act. Contributions are not required to be paid during unemployment, hut through arrears the insured person suffers in benefit. Three weeks arrears, however, in each year through unemployment need not be made up and no reduction in benefit is suffered thereby. Moreover, this period is cumulative, so that after a number of years, during which the contribu-tions have been paid regularly, an weeks in each quarter, and when thous have been paid regularly, an completed will he handed by the insured person may fall into arrears sured person to his society, who will through unemployment for a length give him a new one in exchange. The

tions have been regularly paid, of arrears are by scale according to the number of coutributions in arrear. Medical, sanatorium, and maternity benefits, however, are not suspended until an insured person is in arrears

of over twenty-six weeks.

The present benefits secured and provided for by the Act comprise: Free medical attendance, sickness benefit, disablement or invalidity pension, maternity benefit, and benefit, and The sickness sanatorium benefit. benefit consists of n payment during sickness of 10s. a week for men and 7s. 6d, a week for women for twentysix weeks from the fourth day of sickness; these payments being confined to persons not over fifty years of age on entry and to persons over fifty years of age on entry who have made five hundred or more contributions at the date of any claim. Persons over this age and under sixty who have not made 500 contributions are entitied to the reduced benefit of 7s. for men and 6s. for women during the first twenty-six weeks. Persons over sixty on entry nre entitled to 6s. for the first thirteen weeks and 5s. for the second thirteen weeks. Persons over sixty-five on July 15, 1912, are included in the scheme, but not on any of the above terms. Faoilities are given for them to join approved societies, but no reserve is placed to their credit by the state and the societies themselves will arrango to givo such benefits as are possible for the amounts pald. At age seventy, when the old age pension becomes payable, all sickness benefit ceases. Young persons under the age of twenty-one, uumarried, and with no dopendants, receive: Boys, 6s. for the first thirteen weeks and 5s. for the second thirteen weeks; girls, 5s. for the first thirteon weeks and 4s. for the second thirteen weeks. If married or with dependants, how-ever, they are entitled to the full money benefits. The disablement or invalidity pension provides for a payment of 5s. n week during the whole term of sickness and after the expiration of the twenty-six weeks referred to above. This ceases at age seventy, when the old age pension is available. The maternity beuefit provides for insured women, married or unmarried, and also the wives of insured men, the payment of the sum of 30s. In addition, if the woman entitled to maternity benefit is an employed contributor she will also receive the sickness benefit as well. for the main purpose of treating con-

each year, during which the contribu-{sumption, although it is not entirely confined to this, and other diseases without suffering from any reduction may be scheduled for treatment by of benefit. The reductious in respect the Local Government Board and with the approval of the Treasury. The Act provides for treatment of porsons suffering from consumption in sanntoria which are to he provided with the assistance of the govern-For this purpose they are putting aside a certain sum to assist the local authorities throughout the United Kingdom in respect of their crection. For their maintenance it is proposed that 1s. 3d. in respect of each insured person resident in the county should be devoted from the Insurance Fund, and 1d. in respect of each such person payable out of moneys provided by parliament. undergoing treatment sanatoria, the casb benefit, to which insured persons would ordinarily be entitled during sickness, may payable to their dependants, but in the event of there being no dependants it is payable to the insurance committee towards general purposcs, or by agreement devoted to the maintenance of the insured person. During sickness and in certain conditions where it would be unsafe to disturb a sick person, the Aot provides that no distress or execution may be levied upon an insured person, nor may he be ejected from his home. Where compensation is obtained under the Workmen's Compensation Act, no siekness henefit is payable unless the compensation under the Act falls short of the amount of the siekness benefit, in which case the compensation is supplemented in order to make good the deficiency. Approved societies .- The work of

administration in connection with the benefits described above is placed in the hands of the existing friendly societies, which are being adapted by the government. It is estimated that some 4,500,000 people are already subscribing to friendly societies or trade unlons for certain benefits, and this existing organisation is being used by the government for the furtherance of the N. I. scheme. It is, however, required that these societies shall become what is known as 'npproved' societies, and shall be subject to certain conditions. An approved society must not be a society carried on for profit, and where the number of members is less thnn 5000, it must either itself be-come associated with other societies or be grouped with other societies In the same county or county borough. will These requirements, it The sanatorium benefit is designed rendily seen, are for the purpose for the main purpose of treating con- of dealing with any surplus funds arising from the scheme or receiving, assistance in the event of having to meet a deficiency. The societies will deal with the Insurance Commissioners, and the minimum benefits they will graut will necessarily not be less than the minimum prescribed by the Act. Benefit funds instituted by the employers will, iu certain conditions, be allowed to rank as approved societies, but a member has the right to trausfer his subscription with the employer's share if he desires to do It must be clearly understood that although these societies are selfgoverning they will be under state Their assets supervision. liabilities will be valued from time to time as appointed by the Insurance Commissioners, and any deficiency will have to be made good either by a reduction of the benefits given or by a levy upon its members. by a levy upon its members. It follows that a surplus will be distributed in the shape of increased benefits to members, subject, however, to the same being submitted to the Insurance Commissioners.

It will be seen from the foregoing that although compulsory, the N. I. scheme is to be effected through the ordinary self-govorning friendly and insurance societies, and it follows that since such is the ease there will be certain people below the average in point of health who will not be accepted for insurance by these societies. This has been provided for under the Act by making them what is known as post office or deposit contributors. In this position the mem-ber will obtain his or her insurance card directly from the post office, together with a membership book. The payments will be made in the same way as above described, and the insured person will then be entitled to the usual benefits, the state adding two-ninths, and in the case of a woman one-fourth, but these benefits will be payable only so long as the deposit lasts. If the member dies, three-sevenths, or in the case of a woman one-half, of the deposit lapses to the common fund of the deposit contributor, and the remainder

regarding the public health are pro-

Commissioners will decide the number of members forming these committees, but in no case is the number to be more than eighty or less than forty. They are to be appointed in the following proportions: three-fifths who are members of approved societies and deposit contributors in proportion as nearly as may be to their respective numbers, and one-fifth to be appointed by the council of the county or county borough-of the members comprising this fifth two must be women. Two members are to be appointed by doctors resident in the county or county borough, and one member, or more if the total number of the committee is more than sixty, to be a qualified doctor appointed by the county or borough council. The remaining members are to be appointed by the Insurance Commissioners, one must be a doctor and at least two women. The insurance committees will control the expenditure in connection sanatoria (apart from the grants for building which will be in the hands of the Local Government Board), and will administer the medical benefits. The insurance societics will dispense the moncy benefits only, and will pay in respect of cach member resident in the county or county berough the sum of one penny towards the administrative expenses of the committee. An interesting point in connection with the insurance comthe event of mittees is that in sickness in excessive certain locality they may request that the Home Office or Local Government Board should make an investigation into the circumstances, and should such excessive sickness be found to be due to unhygienic conditions in a factory or other place where workpeople are employed, the employers may be made responsible and have to refund the extra cost incurred owing to such sickness. The ad-niulstration of the medical benefits is also arranged for by the insurance committees. It is their duty to secure for insured persons adequate needs to contributor, and the remainder he can leave at will.

It may be added here that the insurance committees may, after obtaining the consent of the Insurance commissioners, expend more than the amount of the deposits upon medical treatment of post office contributors. The insurance committees are to be set up for each county and county borough, and it will be part of their duties to see that the laws for the payment of dectors was 6s. medical attendance and treatment. ealth are pro- per member, but it was subsequently They will be found necessary to increase this existing local amount. It must be understood that The Insurance in regard to the medical benefits,

for their patients, and not to supply drugs, the prescriptions in every case to be made up by duly qualified chemists, of whom panels are prepared by the insurance committees in the same manner. The whole scheme is supervised by boards of Insurance Commissioners appointed by the Treasury. Separate boards are formed for England, Scotland, Wales, and Ireland, and have a contral office, and such branch offices as are necessary, the expenses in connection with these offices being borne by the Exchequer. An advisory committee is also formed to assist the Insurance Commissioners, and these censist of representatives of employers' associations. approved societies, and others qualified for the purpose.

Before turning to that portion of the Act relating to unemployment, it may be mentioned hero that un-like state insurance against sickness which has been practised in Germany, compulsory insurance against unem-ployment has never before been the subject of legislation by any govern-ment. In this respect it is in some sense an experiment, and conse-quently only applied for the present to certain trades which are reoognised as being the most uncertain in the matter of employment owing to seasonal and other causes.

The trades to be covered are the following: Bullding, construction of works, shipbuilding, mechanical en-gineering, ironfoundering, vehicle manufacture, and sawmilling. Only actual manual workers over sixteen years of nge are included under the Act, which came into force in July It is estimated that out of the working population some 2,500,000 workpeeple were affected at the time the Act came into operation, and these engaged in trades which, as stated above, are particularly liable to times of bad trade and other conditions which render employment ditions which reader employment irregular. The compulsory contributions under this portion of the Act are, for workmen, 2½d. for each period of employment of a week or less, and for the employer 2½d. for the same term. When the period of employment is the day or less the contribution of the same term. ment is two days or less, the contributions of both employers and workmen are 1d. a day. In the case of workmen under the age of eighteen the contributions are reduced to 1d. for each week or less for both employer and workman. The state ployer and workman. The state contributes to the fund one-third of the total contributions of workmen and employers and, in addition, bears any cost of administration over 10 per cent. Compulsion is effected in

doctors are only allowed to prescribe; the same manner as for sickness insurance, the contributions being deducted from wages. The following are the benefits which it is at present proposed the insurance shall give, viz. For workmen over eighteen years of age, 7s. per week after the first week of unemployment up to a maximum of fifteen weeks in any twelve months, and for workmen from seventeen to eighteen years of age, 3s. 6d. It is a condition that an insured man is not to receive more than one week's benefit for every than one week's benent for every five contributions pa.1 by him. If, however, a workman has been employed in an insured trade before the passing of the Act, he receives credit, in addition to the contributions he has actually paid, for five contributions for each three months during which he has been in the during which he has been in the trade up to a maximum of twentyfive contributions. Before a workman can draw benefit at all, he must have been employed at an insured trade not less than twenty-six weeks in the preceding five years. The administration of this scheme will be entrusted to the Government Labour Exchanges, to whom the workman out of employment will take his stamped insurance book and claim

It is important to note in connection with these unemployment benefits that the workman has the right to decline either 'an offer of employment in the district where he was last ordinarily employed at a rate of wage lower or on conditions less favourable than those which he habitually obtained in his usual em-ployment in that district, or would have obtained had he continued to be so employed,' or, 'an offer of em-ployment in any other district at a rate of wage lower or on conditions less favourable than those generally observed in such district by agreement between associations of employers and of workmen, or failing any such agreement than those recognised in such districts by good employers.' On the other hand, a workman is disqualified from obtaining any morning the state of the state taioing unomployment benefits on account of his being directly involved in a strike or lock-ont (he is allowed to decline to interfere in a labour dispute by accepting a situation in connection with it), or if he is out of work through misconduct or through lcaving it without just cause, or while imprisoned, or if he goes into the workhouso.

In the case of trade unions which pay nnemployment benefits, these may, under the Act, dispense the state unemployment benefit by coming to an arrangement to be repaid periodically out of the unem-subscription, six guineas. Secretary, ployment fund, such sum as appears Mr. John Henderson, to he as nearly as may be equivalent to the aggregate amount which would have been received by workmen during the period by way of unemployment benefit if no such arrangement had been made, but in no case exceeding three-fourths of the amount of the payments made during that period by the association to such workmen whilst unemployed. The association is able under this agreement to treat the contributions to the unemployment fund as if such contributions formed part of the subscriptions to the association, and may reduce the rates of members' subscriptions accordingly.

In addition to trade unions which give unemployment pay, the state grants a subsidy of one-sixth of its expenses in this respect. An employer who continuously employs a workman throughout a period of twelve months, and in respect of whom not less than forty-five contributions have been paid during the period, can recover one-third of the contributions he has paid, and a workman on reaching the age of sixty, who has paid 500 contributions or more, may draw out from the fund the whole of the contributions he has paid with 21 per cent. compound interest, less any benefits that he has received.

The above is a statement of the provisions of the National Insurance Sydney. Act as originally passed. As was to Alberta, Canad be expected in a measure of such and Yosemire. complexity and universality, the National Physical Laboratory wa first year's working showed many opened in 1902, managed by an exdefects in administration.

ntinance : 21301 genci dical | to m incl' atten

awoi doctor. that ' maternity benefit shall in every case be the mother's benefit,' and as a means of securing this end enacted | ment of a sman ive. that the receipt of the husband for the benefit money would not be a sufficient discharge unless authorised

by the wife.
National Liberal Club. of London, is the headquarters in Great Britain for social purposes of the Liberal -timent tear Charing

the Gladoks, mainly Annual par.

National Liberal Federation, union for national purposes of all the Liberal associations of England and Wales. It was formed in 1877 as the result of a conference held at Birmingham, and called the 'National Federation of Liberal Associations. The Birmingham 'caucus' and the Central Liberal Association thus coexisted for some time. The objects of the N. L. F. are: (1) To organise political associations throughout the country on the Liberal principles of popular representation; (2) to support the Liberal party in parliament by help ^t election time arranging for pamphlets, etc.: and (a) to it. legislation which secures the adoption of Liberal legislation All the Liberal associaprinciples. tions are affiliated to the N. L. F.; the Metropolitan associatious under the title of the London Liberal Federation and those of the Home Counties under that of the Home Counties linder that of the Home Counties Libera Federation. The president is Hon Sir J. Brunser, and the secretary, Sir R. Hudson: the offices are at 4: Parliament Street, S.W. National Park, Port Hacking, Ner South Wales, Australia, has an area of 57 so me and hearings and re-

of 57 sq. m., and borders on th Pacific for 71 m. The park was se aside in 1880 for the benefit of th asid in 1860 for the benche of the colouists. It lies 15 m. S.S.W. o Sydney. For the National Park Alberta, Canada, see YRLLOWSTON.

defects in administration.
to remedy some of these sible for the Amending Act.

This Act dealt solely with Part I. of the principal Act. Among the most There are five main department There are five main department.

The Kew observatory department the first is at present situated at Richmond

but is shortly to be transferred t

department deals with questions maintaining cleetrical standard photometry, opties, thermometrete. (3) The engineering department investigates the behaviour of bodiunder sustained and intermittee pressure, impact, etc., and tests ror party. The club, which was opened materials for the Road Board. (in 1887, is pleasantly situated on the The metallurgical department earrison.) stit W., ١. Th

National Portrait Galleries. The gallery in London was founded in 1856, established at S. Kensington in 1869, and finally moved to the present building to the N.E. of the National Gallery in 1896. Its chief feature is the collection of portraits of British historical characters, the upper rooms containing portraits, arranged chronologically, of the sovereigns from Richard II., Chaucer, Shakespeare, Cromwell, and the two Pretenders, while the lower rooms contain portraits of celebrated statesmen, divines, and others. There are specimens of Van Dyck, Reynolds, Gainsborough, Romney, Raeburn, Lawrence, and G. F. Watts. There is an admirable catalogue by the first director, Sir George Scharf, K.C.B. (1820-25). For the Scottish National Portrait Gallery see Edinburgh.

National Reform Union, an association founded in 1864 by members of the committee of the Anti-corn Law League (q.v.) to promote political re-form. It was re-organised in 1875; lcotures are sent out by the union, and political literature widely distributed. The objects include the promotion of the formation of Liberal organisations, the propagation of political know-ledge, and the discussion of topical enestions. The union has over 250 branches in all parts of the country; the central office is at Manchester, the London office being in Queen Anne's Chambers, Westminster, S.W. Arnold, The treasurer is Mr. S. M.P., and the secretary Mr. A. G.

Symonds, M.A.

National Review, a monthly review which is remarkable among the reviews from the fact that the editor takes a strictly party line. It was founded in 1883 for the purpose of supplying the demand for an exclusively Conservative publication, and has from its inception carried out that purpose. Alfred Austin edited it until 1893, when W. J. Courthope, who had been joint-editor with Austin. edited it alone. In 1898 L. J. Maxse took over the editorship, and still holds the office. The Review is pub-lished at 2s. 6d.; offices, 23 Ryder Street, St. Janies, London, S.W. National Rifle Association was

founded in 1860, and incorporated by royal charter in 1890, to encourage riflo shooting in the King's dominions. From 1860-89 meetings were held at Wimbledon, after which they were held at Bisley. The first shot at the held at Bisiey. The may show as fired first meeting at Wimbledon was fired by Queen Victoria from a Whitworth muzzle-loading rifle. The competi-

The director of the from all parts of the world. For particulars as to prizes, range, etc., see BISLEY. The offices of the association are on Bisley Camp Ground; the secretary is Lieut. Col. C. R. Crosse.

National Service League was founded in 1902 with the object of introducing a compulsory element into the terri-forial army scheme. The proposals of the league are: (1) Four months' training in camp for every ablebodied yonth in the country between eighteen and twenty-one, followed by musketry practice and a fortnight's camp for three years. (2) A reserve force to be called on when necessary, consisting of the above class up to the age of thirty. (3) Military training to be included in the educational curriculum between fourteen and eighteen. The league is making steady progress.
The president is Lord Roberts, V.C.,
K.G.; the offices are at 72 Victoria
Street, London, S.W.
National Sporting Club, a club for
gentlemen Interested in sporting and

theatrical matters. It was started in 1891, and has long been noted as the scene of the principal contests, both amateur and professional, in the boxing world. The premises of the club are at 43 King Street, Covent Garden, London, W.C.; the secretary is Mr. A. T. Bettinson. The membership of the club is about 700; the entrance fee is five or two guineas, and the subscription six or four guineas for town and country mem-

bers respectively. National Union of Teachers (N. U.T.), the official organisation of the members of the teaching profession en-gaged in elementary or state-governed secondary schools, and may termed the teachers' trade union. was formed in 1870, and a brief re-capitulation of its objects is as follows: (1) To associate and unite the teachers of the kingdom of England and Wales. (2) To provide means for the cooperation of teachers and the expression of their collective opinion upon matters affecting the interests of education and the teaching profession.
(3) To improve the conditions of education in this country, and to obtain the establishment of a national system of education, and to secure for all public elementary schools adequate financial assistance and accommodation. (4) To afford to the Board of Education and other public or private organisations in connection education the advice of the association. (5) To secure the effective representation of educational interests in parliament. (6) To secure the compilation of a comprehensive register of teachers, and the recognition of the union as a diploma-granting authotions at Bisley now attract marksmen rity. (7) To watch the working of the

removal of abuses. (8) To raise the status of the teaching profession, and to open the highest posts in the edn-cational service of the country, Including the inspectorate of schools, to the best equipped members of the There are also a provident society, a teachers' benevolent and orphan fund and orphan homes in connection with the union. In additlon to the above aims, the union affords advice and assistance to members in legal matters, and protects teachers who have been wrongfully dismissed; to meet the legal expenses incurred there is a legal assistance The union holds an annual conference at Easter, the forty-third being held at Hull in 1912, under the presidency of Mr. W. D. Bentliff. The income of the union for the year 1911-12 was £44,122; the legal assistance fund during the same period cost £9429; £25,000 is distributed to charitable various organisations The union examination annually. board conducts examinations and issues diplomas in various commerclal and educational subjects. present membership is about 72,500. being about 70 per cent. of the total number of teachers. The executive of number of teachers. The executive the N.U.T. is vested in a council consisting of the president, the vice-president, the ex-president, the ex-president, the treasurer, and thirty-three other treasurer. The second of Natural History.

Naturalisation, sec Alien.

Naturalism, a term of philosophy which has borne different meanings which has borne different meanings the antithesis of the N.U.T. Is Sir James Yc M.P., and the offices are at Russell Square, London, W.C. See The Yearly Handbook and Account of

Nativity, the name given to the Christmas season, celebrating the birth of Jesus Christ, which is fixed by the Church as Dec. 25. The N. of the Virgin Mary is also observed as a festival in the Roman Catholic Church, and colebrated on Sept. 8. This festival was formally appointed to be observed by the Synod of Salz-burg in 800 A.D., but had in reality been celebrated since about 690. For the various usages in connection with the N. of Christ, see Christmas. In

the Conference Proceedings.

respects are respects are ninor-placed genera forms a natural order family. Classes are still more comprehensive groups, and these are livided luto the two sub-kingdoms Na₁O, Al₁O₃, SiO₂ + 2H₁O₄. Is white or yellowish red in colour and usually less plants.

The property of the property of

of lakes, numbering eight in all, situ-

various Acts of parliament in connection with education, and to secure the Desert, Egypt, 60 m. W.N.W. of removal of abuses. (8) To raise the Cairo. These are rich in natron, or mineral alkali, obtained from the ashes of marine plants. The locality is also noted for four monasteries. from whose bhraries many valuable MSS, have been added to European collections.

Nattore, or Natore, a tn. of Bengal, India, 50 m. N.E. by E. of Murshida-bad. Pop. 9700. Natural (in muslo), the term applied

to any note in its original pitch. normal key, which begins on C, is constructed on Ns. Tho sign h is used to cancel a preceding sharp or flat.

Natural History, a term originally meant the systematic study of all natural objects, animal, vegetable, and mineral, and thus included all sciences, such as biology, geology, chemistry, etc. With increasing knowledge and the growth of specialisation, such a term by Its very vaguoness became unsuitable in many eases. It is, when now used, practically synonymous with zoology, although by some naturalists it is confined to the study of the living organisms, thus not including com-parativo anatomy. The name is gradu-ally falling into desuctude, but sur-vives in such titles as The Museum

to, though differ-See ing slightly from, materialism and pantheism.

Natural Obligation in law means an obligation which is supposed to be prescribed by the laws of nature, as the obligation of a parent to

maintain his child.

Natural Order of Plants, a system of classification of the members of the vegetable kingdom according to the structural and essential characters of each individual, grouping those together which agree in the greatest number of characters. A species comprises individuals which agree in all their constant characters; species

latinises with acids Natron, or Soda Lakes, are a group present day. The philosophy of the ancients included the study of natural

their relations. As knowledge progressed, there was a tendency to subdivido science into various spheres. In the course of differentiation, the -asrctained

vhich does

struoture ! of substances, hut only with such phenomena, as light, heat, sound, etc., which are independent of chomical concoptions. It is no longer possible to maintain such a separation. See PHYSICS, HEAT, LIGHT, SGUND,

PHYSICS, HEAT, LIGHT, SGUND, MAGNETISM, and ELECTRICITY. Natural Theology forms one of the heads under which Cliristian apologetlos was grouped; the other being revealed religion. This division is now gonerally given up, the whole subject being treated on a wider basis and the evidence heing arranged according as it lies in the realm of physics, of psychology, and meta-physics, of morality, or of the spiritual. The classical defence of natural re-ligion is the work of Paley, though it requires much adaptation to bring it into line with the results of later scientific research. The alm of the argument from natural religion is to prove that God exists. This it strives to do from six main arguments (1) That of sevents arguments (1) That of sevents arguments (1) That of sevents arguments (1) That of sevents arguments (1) That of sevents (1) That ments: (1) That of general consent. The universal belief of mankind has more than a subjective value; it has become objective. (2) The oosmobecome objective. (2) The oosmological argument, which, taking the world as the effect, argues a posteriori to a first cause. (3) The teleological argument, or argument from design, stated by Paley in his first chapter, where he makes the well-known comparison of the world to a watch. (4) The ontological argument, which wo owe to St. Anselm, which bases belief on the statement that 'that must exist than which no greater can be conceived.' It is developed at length in his Proslogion. (5) The argument from man's moral sense; and (6) the argument from the design in history.

Nature, the name of a weekly periodical which was established in Nov. 1869. It aims at placing its readers in touch with the results of scientifio claims and discoveries, and urges the claims of science to a more

Articles on recognition. subjects, full accounts of

coveries, reviows of notable books and l papers, and accounts of noteworthy meetings, are included. The oditor has been from its inception Sir Norman Lockyer. The paper is pub-lished on Thursday by Macmillan, and the price is 6d

Nature Printing, the name of a process of obtaining plates or engravings by means of impressions taken from Nature Worship, the worship which the actual objects, and by printing is given to any of the powers or

phonomena and hypotheses regarding from these impressions. This process can only be used in connection with objects which have flat surfaces, such as lace, and dried plants. The result is obtained by placing the object be-tween two plates, one of copper and another of lead, and by pressing the plates by means of a pair of rollers. The Impression thus produced on the leaden plate may be used if only a few copies are needed, but if a large number is required a facsimile of it may be obtained on copper by the

electrotype process.

Nature Study, a modern rovolt against the hookish tendencies of older methods of education. It is enoouraged in schools with the object of teaching children to observe for them. selves and not to accept common hearsay, with its frequently superstitious associations, as fact. Through it a child may be admirably grounded in the rudiments of most of the natural sciences, so th

Interests are b

of thought an scientific. In relation to the modern attempts to repopulate the country-side, N. S. is of the very first importance, especially in the country schools. It should do much to cheek the flow of country-bred children to the towns, and by creating a lively interest in nature should greatly stimulate tho desire for a life in the open air. It is no fanciful ideal thus to create a rural population which by its ability and scientific resources could increase the productivity of the land as much beyond the average yields of the early 20th century as they are beyond those of medieval times. On the authority of the Board of Education, N. S. is so much on the increase that it is rather the exception than the rule to find elementary schools where no attempt at any form of N. S. is made. Nccessarily methods vary widely, but the school rambles or excursions with note-taking and sketches are essential features, and from a general interest iu everything seen and heard the children are gradually encouraged to systematise their observations. The practical application of N. S. in schools by gardening, and by tho live stock, such as , has lately made

will become a more prominent feature of the olementary cducational system as the supply of teachers qualified for the work in-creases. School gardens have been for some years a prominent feature of tho French system of elementary oducation, and the results have been found to be eminently satisfactory. SCHOOL GARDENS.

various forms. In most cases the powers of nature are personified, and the spirit which is regarded as belonging to them is the object of adora-Among the objects which are worshipped may be mentioned stones of various sizes and forms, trees which were either supposed to be the deity or the dwelling-place of his spirit, animals which are worshipped in some cases because they are sup-posed to contain the spirit of a de-parted friend or relation, and in others because they are of usc. The sun and moon were worshipped by some early tribes, as were also tho stars, and they still remain as deitics among somo races. The worship of rivers, water, and of mountains has been practised in various countries at different times and in different ways. sometimes the thing itself being the object of worship and sometimes a heart to cope with its work successfully. spirit embodied in it.

Naucratis, the name of a Greck trading settlement in Egypt, which was situated between Cairo and Aloxandria, near the modern Nebireh. The settlement was probably founded Milesian colonists about 7th century B.C., and was noted for its flowers and pottery. The site was discovered in 1884, and the ruins include those of temples, bulldings, etc.

N. was at one time the only trading settlement in Egypt open to Greeks. Naudé, Gabriel (1600-53), a French soholar and Ilbrarian, born at Paris. He studied medicino at Paris and He studied medicino at ratio Padua, and was physician to Louis XIII. In 1628 he took charge of Cardinal Bagnio's library, and in librarian to Cardinal 1641 was librarian to Cardinal Arberini and later to Queen Chris-tina of Sweden. In 1653 he was requested by Mazarin to come and help him to re-form his library, which N. bad helped to collect, and was on his way when he died at Abbeville.

Nauen, a tn. of Brandenburg,
Prussia, 20 m. N.E. of Brandenburg.

Prussia, 20 Pop. 9180.

Naugatuck, a bor. of Connectleut, U.S.A., in New Haven co., 27 m. N.E. of Bridgeport. The manufs. are chemicals, cutlery, and rubber goods. Pop. (1910) 12,722.

Nauheim, or Bad Nauheim, a tn. in the grand-duchy of Hesse-Darmstadt, Germany, 24 m. N.N.E. of Frank-fort-on-Main. It is a noted health

resort. Pop. 5695.
Nauheim Treatment, a system of treating disease of the heart which involve

eourse (exercis. grand

about 24 m. by rail N. of Frankforton-Main. It possesses thermal saline

objects of nature and which assumes springs with a temperature of from 84° to 95° F., which are impregnated with carbon-dioxide and contain a little iron. The waters are specially recommended for anemia, gout, and affections, and rbeumatic heart weakness consequent upon rheumatic fever or influenza. Combined with the bath treatment is a system of gymnastics called the Schott method. which involves movements against a resistance carefully graduated. Cardiac dilatation is a common consequence of influenza, and the condition is likely to cause trouble if no effort is mado towards suitable treatment. The best treatment is rest amidst hygienic surroundings, and the N. T. probably owes a great deal of its success to the pleasant and healthful nature of the environment and the freedom from worry, as well as to the exercises which gradually accustom the

> Naumachia (Gk. ναυμάχια, from raûs, a ship, and μαχή, a battle), the name which the Romans gave to the mimic sea-fights which were waged as a spectacle, and also to the seenes of the combats. The latter took place sometimes in the Circus Maximus. water being introduced sufficient to float ships. The first N. on record represented an engagement between the Tyrian and Egyptian fleets, and was given by Julius Cæsar In 46 p.c. in the Campus Martius. Tho custom of exhibiting naumachine was not confined to Rome, as we find arrange-ments for flooding the amphitheatres at Capua and Nimes. The com-The combatants fought as in the gladiatorial games, no quarter being given: gladiators or condemned eriminals

were employed.

Naumburg, a tn. of Prussian Saxony, on the Saale, 24 m. S.W. of Halle. There is a considerable wine trade, and mannis. of beer, vinegar, chemicals, cot

etc. The mos the cathedral

Naunton, Sir i.

anthor and statesman, noted for his book Fragmenta Regalia, or Observations on the Late Queen Elizabeth, her Times and Favourites (1641), which was revised by Sir W. Scott in 1808, and who added N.'s memoirs to the odition. I Coulded also added the edition. J. Caulfield also edited this book in 1814. In 1601 N. was elected

Rognests (1603). After holding other political offices, he was appointed Secretary of State (1618). See *Life* by J. Caulfield, 1814 (1).

Naupactus, the name of an ancient

Greek city on the Corinthian guit. The Messenians settled in N. after

captured it from the Acheans. The town had an excellent harhour; on its site is Lepanto, a seaport, 12; m. N.N.E. of Patras.

N.N.E. of Patras.
Nauplia, a small fortified tn. and seaport, cap. of Argolis, Greece, at the N. extremity of the Gulf of Argos or Nauplia, and 7 m. S.E. of the town of Argos. In the 13th eentury it was oeeupied by the Venetians, and was taken by the Turks in 1540. From 1894t 1325 it went have of Cross. From 1824 to 1835 it was the cap. of Greece.

Pop. (com.) 11,000.

Nauplius, the unsegmented larvæ of the lower crustacea with a single

frontal eye. See CRUSTACEA. Nauplius, King of Euheea and father of Palamedes. To avenge the death of his son, whom the Greeks had put to death during the siege of Troy, he watched for the return of the Greeks, and as thoy approached the coast of Eubera he lighted torelies on the dangerous promoutory of Caphareus. The sailors, thus mis-

gnided, suffered shipwreck.

Nausea, a souse of sickness at the stomach, a desire to vomit. The word! is derived from rais, a ship, and is therefore especially associated with sea-siokness. The condition is, howover, brought about by many varied affections of the nerves and digestive organs. It is one of the preliminary symptoms of influenza, it accom-panics migraine or sick headache, and even severe neuralgic conditions with no apparent connection with stomach; it is also produced the by and purely imaginary conditions, and schsitive persons experience it on ets which have ions.

vomiting begins; the languor, a moist ski and an increased flow vomiting, considerable relief is cx-

perienced. Naushara, a tn. and eantonment of the Punjah, India, 25 m. E. of

Peshawar. Pop. 10,000. Nausicaa, the heautiful daughter of Aleinous, king of the Phæseians, and Arete; was noted for her simplicity, modesty, and gentleness. One day nuodesty, and gentieness. One day when she was playing ball on the shore she saw Ulysses asleep, who, after leaving the isle of Calypso, was shipwreeked and swam to the shore where N. was. N. took him to the court of her father. See Homer's Odyssey, vi.; Symouds, The Greek Poets, vol. i., 133-137.
Nautoh Girls. See BAYANTER

Nautch Girls. See BAYADERE. Nautical Almanac, a volume tables and calculations of the tides, times of sun's meridian, and other calculations. It is used by navigators

being expelled by the Spartans in and astronomers, and is published 459 B.c.; in 338 B.c. Philip of Macedon annually, several years in advance. annually, several years in advance. First produced in 1767; it was from then until 1834 under the direction of the Royal Astronomical Society. when it was taken over hy the Admiralty. The offices are at 3 Verulam Buildings, Gray's Inn Road, W.C. Nautilus, a name given to two distinct Cephalopods, but the pearly

N. is generally indicated, the paper N. being reforred to the quite distinct genus Argonauta. The genus N. inhahits the Indo-Pacific Ocean, and differs from all other living Cephalopods in having four gills instead of two, whence it is placed in a separate order (Tetrabranchia) of its class. Of over thirty genera of that order it is the only surviving genus. It differs, too, in having a number of small retractile feelers instead of arms with suckers and hooks, and in having an external chambered shell. The shell is pearly within, and has a regularly convoluted form, the last whorl being equal to all the others. The chambers or cells are perforated towards the centre and connected by a slender tube or syphon which probably makes the progress of the shell muscle. The number of partitions in the cellindicates the periods of growth, a new outer chamber being added as the capacity of the previous one is outgrown. Externally, the shell is outgrown. Externally, the shell is covered with a calcareous layer, and is brown in colour and marked by dark bands 'like a tortoiseshell cat.' The shell yields a fine mother-of-pearl, which is used for inlaying. The N. frequents the sea bottoms, where, with its foot, it can make fairly rapid h have progress. It lives chicfly on molluses N. is and small crustaceans, and is some-

lobster pots and hoop or members of its class. swims backwards on

the syphon, the head and tentacles heing projected out of the shell; hut the rise is prohably involuntary and is eaused by storms. The animal appears to he much exposed to the attacks of various enemies, having no operculum, and being but feebly attached to the shell, and it is the only Cephalopod which lacks the power of discharging an ink-like fluid to darken the water to escape from its enemies. On the Nicobar coast of India its flesh is salted and dried.

Nauvoo, a city of Illinois, U.S.A., in ancock co. on the Mississippi, Hancock eo. 42 m. N. of Quiney. It was founded by the Mormons in 1839, who were driven out in 1846. In 1846 the pop. of was over 15.000; in 1910 it had decreased to 1020.

Navahoes, Navajoes, or American aborigines, forming the most important tribe of the southern; division of the Athahascan stock of the N. American Indians. The remnants of the tribe are located in the Navajo rescrvation, New Mexico and Arizona, and number about 20,000. See Dr. W. Matthews, Navaho Legends, 1887. Naval College, Royal, see GREEN-

WICH ROYAL NAVAL COLLEGE. Naval Discipline Acts define the offences and procedure of naval law. The Act which is now in force is the Act of 1884, which amended the Act of 1866. This Act defines the constitution of the court-martial which tries naval offences, and regulates its personnel according to the rank of the person charged. The Act also defines the limit of locality for naval law. See COURT-MARTIAL

Naval Education. Naval cadets are chosen from among nominated candidates, who are interviewed separately hy the Commission; the chosen candidates have to pass a qualifying literary examination. Every cadet Every cadet must be not younger than twelve years eight months nor older than thirteen years, and must be the son of British parents. The period of training lasts for four years and eight months: two years at the Royai Naval College, Oshorne, two years at the Royal Naval College, Dartmouth, and two torms on a training eruiser; £75 per annum must be pald for cadets, in addition to pocket money and the cost of instruments, hooks, etc.; a few sons of officers who are in straitened circumstances are taken for £40 per annum. Six cadets are taken into the Royai Naval Collego, Dartmouth, annually from the Conway training ship for the mercantile marine; they must he between four-teen years eight months and fifteen years in age, and have served on the Conway for two years. The Royal Naval College, Greenwich, is open to officers of the Royal Navy, Royal Marines and Royal Indlan Marine, and mercantlle marine for instruction in the theoretical and scientific studies appertaining to the hranch of the service they have chosen. A special class of naval cadets has heen Instituted. Candidates for admission in 1913 must he between seventeen and a half and nineteen years on June 1, 1913; the examination is competitive, and the successful candidates will he trained as cadets for one and a half years, when they will join the ficet as midshipmen. See the current Navy List (quarterly) for further particulars.

Naval Expenditure. The real ho-Ships under Convoy (1746), one of the ginning of the expenditure of a fair intest hooks issued on the latter proportion of the public funds on the shipect being The Seaman's Signal upkeep of the navy dates hack to the Manual for the Use of His Majesty's

time of Cromwell. Previous to that time the navy, such as it was, had heen supported chiefly hy special grants and hy ship money, a tax which is supposed to date hack to the time of Alfred the Great. By 1688 N. E. had reached the sum of nearly £1,000,000 per annum, hut during the 18th century, when we were struggling for colonial supremacy, the personnel of the pays and the struggling for colonial supremacy, the personnel of the navy and the cost of the upkeep went up hy leaps and hounds. Under the administration of the elder Pitt, the expenditure per annum reached £5,500,000, and during the American War of Independence the personnel of the navy reached practically 100,000 men, and the expenditure was well night \$9,000,000 mer annum. By the end £9,000,000 per annum. By the end of the Napoleonic war (1815) the expenditure had reached the colossal figure of £23,500,000. During the peace years which followed it remained evenly at ahout £7,500,000; this naturally increased during the Crimean War, when the figure again erept to ahout £20,000,000. But within the last twenty years we have experienced an era of large N. E. The competition of rival nations has heen great, and British N. E. has neen great, and British N. E. has heen proportionately so. In the financial year ending 1906, the N. E. was well over 33! million pounds. In the financial year ending March 1913, the total amount voted for the navy was £45,075,000, and the personnel of the fleet was increased by 3500 men. Four new buttleships were held men. Four new hattleships were laid down, but the construction estimate was £700,000 iess than that of the provious year. Naval Literature, The literature which has grown up round so important a subject as the navy has by

this time reached immenso propor-Wo can deal first of all with official literatures, and we find that this side of the subject alone contains such a vast amount of works that it is possible here only to mention the chief headings under which they can be found. 'General regulations' is the title of the first subheading, and the literature to be found here deals simply with those regulations which govern the men who helong to the Royal Navy. Special handhooks are issued which deal with special subjects, such, for example, as manuals jeets, such, for example, as manuais of gunnery, handbooks for special guns, e.g. Handbook of the Nordenfeldt 6 Pr. Quick-firing Guns, Marks I. and II., Handbook of Gymnastic Exercises for the Use of His Majesly's Fleet, Signals for the Royal Navy and Ships under Conroy (1746), one of the batest hooks issued on the latter

Navy (2 vols). Special mannals are ship (an Admiralty publication) also issued dealing with training Literature dealing with naval science ships, uniform, watch, station, also is to be found in large quantities: ships, uniform, watch, station, quarter, and fire bells, reviews and manceuvres, Royal Marines, Royal Navy Resorve, and there is, of course, also the state of th also the periodical publication, the Navy List. Practically two columns of the catalogue of the British Museum Library are taken up with lists of addresses and petitions from the Royal Navy, and in glancing through the columns of this we find. A letter from the commanders and officers of the fleet of this commonwealth unto General Monck in Scot-land '(1659), and 'To his Highness the Lord Protector, the humble petition of the scamen belonging to the ships of the commonwealth of England. Amoug the miscellaneous literature catalogued in the volume already mentioned we find, A Brief Inquiry into the present condition of the Royal Navy (1804), which only goes to prove that a topic which is ever recurring at the present day is by no means new, and also a copy of the oath taken by the seamen of the rovoited ships (1648). rovoited ships (1648). Most of the pamphlets to be found here deal with somo grievance or some supposed fault Memoirs of of the Royal Navy. To to the more modern sid

ture of the British Re find that within even the last few years that literature has increased at a very great rate. We will consider first of all some of the more important works which deal with navel history: Earliest Engl and the First Schools of

wealth and the First Dutch War' (Cambridge Modern History, vol. iv., 1906); Naval Operations between Great Britain and America, 1812-16 (Theodoro Roosevelt); Pepys's Memoirsofthe Royal Navy, 1879-88 (ed. by J. R. Tanner, 1906); 'The Struggle for the Mediterranean' (Cambridge Mediterranean' (Cambridge Cambridge Cambridge Mediterranean' (Cambridge Mediterranean' (Cambridge Mediterranean') (Cambridge Medern History, vol. ix.), beth by H. W. Wilson. Turning to modern general literature which has seme bearing on the navy, we find amongst many other publications the following: Sea Law and Sea Power as they would be affected by the Recent Proposals (T. S. Bowles. 1910): Britain and America, 1812-15 (Theo-Recent Proposals (T. S. Bowles, 1910); British War Fleets: the New Scheme of Reorganisation and Mebilisation (A. S. Hurd, 1905); Die Englische See

The Art of Naval Warfare (Sir C. A. G. Bridge, 1907); A Study of Naval Strategy (R. Daveley, 1909); Naval Administration and Warfare (Mahan, 1908); and on special topics we find a literature on such subjects as: Submarine Navigation and Warfare, Naval Art, Deutches seemännisches Wörterbuch (A. Stenzel, Berlin, 1904). Other books which may be mentioned in this class are: A. T. Mahan's In-fluence of Sea Power upon History (1890), Influence of Sea Power upon the French Revolution and Empire (1892), and Sea Power in its Relation to the War of 1812 (1905); Fronde's English Seamen of the 16th Century. An important side of naval literature is that which deals with the biographies of famous seamen. Amongst the more important of this class may bementloned: Southey's Nelson (1813), A. T. Mahan's Nelson (1899), Corbett's Drake (1890), Hannay's Blake (1886) and Rodney (1868), Brer Jones's Fro Drake and

(1903), and W. Clark Russell, most of whose sketches and stories have for their main topic some naval adventure. Amongst personal reminiscences we must mention: Pepys's Diary, 1660-78, Taubman's Diary of a Chaplain (1710), Dampier's Voyages (1779), Cook's Voyages (1893), Osborn's Stray Leaves from an Arctic Byron's Journal of d the World, Hobart

from My Life (1886), Darwin's Journal of H.M.S. Beagle in 1831-6 (1890), and Voyage of the Beagle (1852), Naval March

Naval Manœuvres, an annual period of training which is carried out by the fleets under practically war conditions. It is impossible to reproduce actual war conditions, but everything is done to instruct and train the crews in the art of actual war. They consist almost invariably of show battles, and macht (Conn't Reventiow, 1906); Sea have within recent years consisted of Power and other Studies (Sir C. A. G. attacks on the E. coast, cocast, occasionally Bridge, 1910); Manual of Seaman-in conjunction with a military force.

In 1912 a Red force, which repre- After having become gradually amaisented an invading fleet, was opposed by a Blue flect, the defending force, but the Red fleet was actually suecessful in landing theoretically a large force in Filey Bay (Yorks.) without molestation from the defending force. In 1913 an attempt made to land a

Navan, a tn. of eo. Meath, Ireland, situated at the junction of the Boyne and Blackwater, 7 m. N.N.E. of Trim. It manufs. woollens. Pop. (1910)

3800. Navarete, Juan Fernandez (1526-79), surnamed El Mudo (tbe Mute), a Spanish painter, born at Logroño. He is supposed to have heen a pupil of Titian at Venice. In 1568 he went of them at venes. In 1505 he went to Madrid as king's painter to Philip II., at a salary, and painted in the Escorial the three pictures of 'The Nativity,' 'The Baptism of Christ,' and 'Abrabam receiving Three Angels. His works are characterised by freedom of design and warmth of colouring.

Navarino, Pylos, or Neocastro, a fortified scaport of Greece, on Navarino Bay, in the prov. of Messenia, 56 m. S.W. of Tripolis. To the N. are situated the ruins of the ancient Pylos. In the hay (1827) the English, French, and Russlans united for the protection of Greece, and defeated the Turkish and Egyptian fleets. Navarre, a prov. of Spain (formerly

a kingdom forming a part of France and Spain), is bounded on the N. by France, on the S. and E. by Aragon, and on the W. by the Biscays. Area 4055 sq. m. Pop. 312,020. The countries of the count try is mountainous, heing bounded and traversed by the Pyrenees, spurs of which occupy almost the whole of the province in its northern and eastern eastern ----Altovise

N. ls w Aragon, on the level shores of which eorn, wine, and oil of good quality are eorn, which and on of good dualty are produced. Some of the valleys which intersect the mountain ranges, as those of Roncesvalles, Lescon, Bastan, and Roneal, have a fruitful soil, and yield good erops: but in the mountain districts husbandry is impracticable. Cereals, oil, wine, and fruit are produced, and the manufs. include textdes, soap, candles, leather, and paper. Iron, silver, lead, copper, and salt are the eblef mineral products of the district. The chief town is Pamplona (q.v.).

gamated with their conquerors, the people continued to enjoy a species of turbulent independence under mill-tary leaders until the 8th century, when they were almost annihilated by the hordes of Arabs who were rapidly spreading their dominion to all parts of the peninsula. In 1285 it became an appanage of the crown of France, and continued a part of that kingdom during the successive reigns of Louis X. Philip V., and Charles the Fair; but on the death of this last in 1328, France fell to the family of Valois, and the daughter of Louis X.. the rightful heir, daughter of Louis A. die righter daus verscheded to N. as Jonna H. Ferdinand seized Spanish N. in 1512, when it became part of Spain, and the small strip of territory on the N. of the Pyrenees became merged in the crown of France. After this act of spoliation there remained nothing of ancient N. beyond a small territory on the northern side of the Pyrences. on the northern side of the Pyrences, while was subsequently united to the erown of France by Henri IV. of Bourbon, king of N.. whose mother, Jeanne d'Albret, was granddaughter of Queen Catharine; and hence the history of N. ends with his accession to the French throne in 1589. The Navarrese were, however, permitted to retain many of their anoient municipal charters and constitutional privileges, after their incorporation with the other domains of the Spanish crown, and these prerogatives were not taken from them till the reign of Queen Christina, when the active aid which they had furnished to the Pretender, Don Carlos, drew upon them the Ill-will of the government, and led at the close of the Carlist War to the abrogation of their fueros, or national assemblies, and to the auni-of their nationality with kingdom at large.

e, Martin Fernandez de Anezo, and by the Ebro, together (1705-1844), a Spanish scholar and with its tributaries the Ega and naval officer, born at Abalos. He entered the navy in 1780, and became a captain in 1796. From 1789-92 he was appointed to collect documents relating to the history of the Spanish navy; he was made director of the hydrographic department in 1823, and senator and director of the Madrid Academy of History in 1837. His works include Coleccion de los viages y decubrimientos que hicieron por mar los Españoles desde fines del Siglo XV. Disertación sobre la His-toire de la Naulica (published 1846); Biblioleca Marilima Españolo, etc.

Nave, in ecclesiastical architecture The territory known from an early the main central division of a church, period of Spanish history under the having aisles on either side. It is name of N. was occupied in aneient separated from the aisles by rows of times by the Vascones, who were sub-plers or columns, and is generally the dned by the Goths in the 5th century. highest portion of the building. Tho

by the laity.

Navew, or Navet, a name for several cruciferous plants which, originally classified together as Brassica campestris, were divided by Sir Joseph Hooker into three sub-species, B. rapa, from which the turnip is derived; B. rutabaga, swede turnip; and B. napus, rape. The difference in the varieties probably results from the objects and methods of cultivation, Navia, a tn. of Spain, in the prov. of Oviedo. 46 m. W.N.W. of Oviedo.

Pop. 6500.

Navia de Suarna, a tn. of Spain, in the prov. of Lugo, 30 m. E. of Lugo. Pop. 5800.

Navicular Disease, or Groggy Lame-ness, an inflammation and ulceration of the navicular or shuttle-bone of the horse, invariably occurring in the forefeet, and due sometimes to heredi-tary causes or to overwork on hard roads, but more commonly to driving at excessive speed after the horse has The inflammation causes a exoroise. constant irritation in the foot, which sets up an extra growth of horn; the removal of this, frequent shoeing, for preference with an indiarubber bar preference with an indiarubber bar pad, and short shoe, affords much relief and enables the animal to work tolerably well, but the disease is practically incurable.

Navies, see NAVY. Navigation, the name applied to the science of finding the position of a vessel at sea, and so directing her from one point to another. During practically the first fifteen centuries of the Christian era early sailors, such as the Phœnicians, the Carthaginians, Greeks, and Romans, depended en-tirely upon their observation of the skies and their proximity to the coast, out of sight of which they seldom ventured. The Vikings probably did most of their navigating under similar conditions, and their discovery of Iceconditions, and their discovery of Ice-land, and possibly of America, was due to their being blown out of sight of land and their inability to direct themselves. During that period in the history of Europe which is usually known by the name of the Renaissance, the science of N. began to become a more or less exact one. This was due very largely to the dis-coveries of the sailors of Portugal, and coveries of the sailors of Portugal, and

term was anciently used to include came into general use. Davis in-the aisles, denoting all the part used vented a back staff which seems to have been very generally accepted, and this form of quadrant remained in use for a very long time. Very much about the same time an instrument came into use for the determination of the height of the sun and stars (the astrolabe). But the inventions and discoveries of Mercator did much to make N. more a matter of exactness and less of general guesswork than it had previously been. The inventions of Wright did much also in this direction, and finally, towards the beginning of the 17th century, arithmetic, trigonometry, and logarithms began to be used as methods of calculation in place merely of calculating by means of instruments. A great number of works on the science of N. have been published, and during the 16th century we find that attention seems for the first time, as far as bterature is con-cerned, to have been drawn to this subject. Probably the greatest work at excessive speed after the horse has of this century was that of Martin been kept for some time without Cortes, whose work was accopted as authoritative. Amongst English books on this subject may be mentioned Cunningham's Cosmography and Navigation, the work of Davis and Mercator, and in 1754 J. Robertson's The Elements of Navigation. In 1763 the British Mariner's Guide was published by Dr. Maskelyne, and this really was the nucleus of the Nautical Almanac, which was first published in 1767. The author of the published in 1767. British Mariner's Guide had also, two years previous to this first publication, discovered a method by which longi-tude might be determined by lunar observation.

Navigation, Practical: Coastal .-- In navigating a vessel along a coast the oxact position is usually ascertained by reference to points of land, light-houses, and beacons; failing this, by means of reference to the ohart and to any places marked prominently on this. When it is possible to refer to When it is possible to refer to more than one point, the position is easily ascertained, but when only one point is available, a bearing of that point is taken and the distance estimated in that way. This, however, is proully upperticative and only one usually unsatisfactory and only approximate. Another method adopted is to take a bearing of a point and then continue the vessel in the same course for some distance, at the end of which time another bearing is more especially to the work of Prince of which time another bearing is Henry the Navigator. The cross taken, and these two bearings are staff, an invention by which longitude staff, an invention by which longitude by Werner about the beginning of same direction as the ship's course, it is possible to find and mark the exact logical observation in conjunction position of the vessel. Another variawith the use of nautical instruments

ing the position of the vessel is known; meridians and the equator are shown as the 'four point bearing.' This is used when the ship is 'abeam' of the point of which observation is being made. A bearing is also taken when the point is four points on the bow. Whon it is possible to take observations of two points, these observations are taken simultaneously and marked on the chart, the point of intersection is the position of the vessel. three points in view an instrument called a station pointer is used, and the angles between them found by means of its three arms. These three arms are attached to a circle made of wood, and whon the arms have been placed in such a position that they correspond with the angles between the points, it is placed on the chart. and the centre of the circle gives the exact position of the vessel. coastal navigation, when the weather is foggy, the ship is navigated by means of 'feoling' round the coast with the lead or sounding machine. Naturally this is the most unsatisfactory of all methods, and soundings have to be continually taken in order to get even an approximate position. It is necessary also to bear in mind that all bearings taken from the compass must be converted into magnetic bearings before being marked on the magnetic chart, and even if the chart is a true one, variation must still be allowed for. A bearing may be best defined as an observation by compass of the direction in which a point lies from the vessel.

Modern ocean navigation.—The increase both in the size and the speed of ships has led to many developments in the science of navigation. Problem

theoretic become

of navigation to day is much more intricate and precise than it was some decades ago. A long ocean voyage is first mapped out as carefully as possible on a great circle chart, tho shortest possible route heing chosen. Tho track thus chosen is followed also on a chart which shows probable wind directions and currents, and is modified according to the informa-tion therein given. In addition, the tract chosen would be also modified by suc rvigators' on would books . give ar supplied by the Admiralty's Ocean Passage Book. Next the route would be trans-ferred from a great circle chart to Mercator's projection chart, on which the great eircles are shown, for con-venience' sake, as straight lines, ship) is shown as a curved line.

on Mercator's projection as straight lines. The great circles are not followed in the steoring of the ship, in place each circle is divided into chords which are followed instead, since that means only the alteration of the course hy one or two degrees at the end of each chord, whereas to follow the great circle would involve the constant changing of the course. The general track to be followed having already been laid down, we may briefly describe three methods hy means of which It is possible at any point during the voyage to ascertain the exact position of the vessel. These three methods are: (1) The recording of the track on charts, a difficult matter owing to the constant errors which creep in and which cannot well be avoided; (2) by trigonometrical calculation, which is based on the course steered and the distance run; (3) by astronomical observation. As long as the sbip is in sight of land, those methods which have been described under the heading coastal navigation (q.v.) are used. In rough or hazy weather continuous soundings are taken when in localities which are known to be dangerous, and it is necessary to remember that the soundings must be continuous, since an occasional sounding is more dangerous than useful. Lord Keivin's sounding machine is usually used for that purpose nowadays. During these periods the coast chart is used, this being on a very much greater scale than the ocean chart, which is usually known as the small scale chart. Refere leging eight of land the latitude ated by means

described, and the exact position is transferred from the coast chart to the small scale ehart. After this the position of the ship is calculated by the mothods given under the heading (2) above. This method is rectified wherever possible by means of astronomical observation and by a calculation of the changes of latitude and longitude hy means of plane trigonomietry, froquent use being made of the traverso tables. These mothods of discovering the exact position of a ship are known as dead reckoning, and the modern ship's compass, patented by the late Lord Kolviu, has done much to en-sure the accuracy of the dead reckoning. The distance run by the ship is obtained by the patent log, the hand iog being regarded nowadays as giving only the roughest estimate of iog the distance run. Nor is the patent log regarded as entirely accurate, the whilst the 'rlumb' line (the repre- distance run by the ship being calcusentation of the navigation of the lated more accurately nowadays by All the number of revolutions of the

ascertaining the exact position of the ship, however, is by astronomical observation, and this is always em-ployed wherever possible. Dead reckoning is only used during bad weather conditions, and when we remember that night observations can he accurately taken nowadays, we can realise that the navigator need never be for long without accurate observations from which he can tell the exact position of his vessel. The astronomical observations are attended by many difficulties. The instrument used for making these strument used for making these observations is a sextant; but this, in spite of its really marvellous accuracy, owing to the conditions under which it has to be employed, must give rise to some little error. Navigators attempt, and to a great extent succeed, in rectifying such error hy taking the average result of a number of observations made at a number of observations made at different times. One of the greatest marvels of modern navigation is the reliance which can be placed upon navigation by star observation. difficulties which were alleged to accompany night observations previously have by the light of experience viously haveny one night of experience been swept away. The most accurate of all observations is probably the twilight observation, when the brighter stars are just visible and the horizon is visible also. For this purpose the armillary sphere is employed. This armillary sphere is employed. This is a small colestial globe on which is marked all the principal stars visible to the naked eye. By manipulating the sphere, which is elevated, until sidereal time is under the fixed meridian, a correct representation of the heavens is thus obtained. This in-strument is used not only at twilight hut atnightalso, arrangements having heen made for this purpose during the twilight observation. Astronomical observations are made at sea for

The chief heavenly bodies observed are the Sun, Moon, Venus, Mars, Jupiter, Saturn, and the Pole Star, together with all stars of the first magnitude. The Nautical Almanac gives the position of all these for fixed times at Greenwich, and gives also all necessary information for computing the needs to present the computing the needs of the position of the product of the puting the position of these bodies at all times in all places.

Navigation Acts, a long series of Acts of a proteotive nature which

engines. The most accurate means of passed at the beginning of Charles ascertaining the exact position of the H.'s relgn, directed principally against ship, however, is by astronomical the Dutch. This provided that imports should he brought into England only in English vessels, commanded and manned by a majority of English subjects. This rostriot lon also applied to any English dependencies. very great extent these laws accounted for much of the trouble between Great Britain and Ireland, and also between the American colonies and the mother country. These restrictions ou foreign trade were not totally withdrawn until the middle of the 19th century, and even in the withdrawal of these restrictions the right was retained to retaliate if restrictions were placed on British navigation in foreign waters.

Navigator's Islands, see Samoa.

Naville, Edouard Henri (b. 1844), a
Swiss Egyptologist, born at Geneva.

In 1869 he went to Egypt, and in
1870 published Textes relatifs au mythe d'Horus recueilles dans le Temple d'Edfou. In 1874 he was commissioned by the London Con-gress of Orientalists to edit the toxt gress of Orientalists to edit the toxt of the Egyptian 'Book of the Dead,' which appeared in 1886 as Das ägyptische Todtenbuch der 18 bis 20 Dynastie. Since 1882 he has been conducting investigations for the Egypt Exploration Fund. In 1891 he was appointed professor of Egyptology in the University of Geneva. He has published memoirs on The State has published memoirs on The Store

has published memoirs on The Store City of Pilhom, 1885; Goshen and the Shrine of Saft el-Hanneh, 1887; Deir el-Bahari, 1894-1901; The Papyrus of Toniya, 1908.

Naville, François Marc Louis (1784-1846), a Swiss philosopher, born at Geneva. He was pastor at Chancy in 1811, and founded there, and later at Vernier, a model school. He followed the philosophy of Maine do Birau, and helped to make him known. He published De Pedguation multipure. published De l'éducation publique considerée dans ses rapports avec le

consucree aans ses rapports arec te développement des focultés, la marche progressive de la civilisation, et les besoins de la France, 1832, and La Chorité legole, 1836. Navy, The British, holds the fore-most place among the navies of the modern world for the following reasons. In the first place the his-tory of that N. is longer than that of any other and secondly it. of any other, and secondly, it is the greatest N. numerically of modern times. The appointment of a count of the Saxon shore was in reality the forerunner of an efficient feet to protect that shore from foreign invasion. The incursions of the Vikings made it necessary to pro-vide some force by means of which we could repel and in time stop the have been passed from time to time fleet to protect that shore from oxoluding foreign competitors from foreign invasion. The incursions of competing on equal terms with English ships. Although these Acts date hack to the time of Richard II. we could repel and in time stop the nevertheless the chief Act was that

East. Alfred the Great the history of our N. is continuous. Alfred fought the Danes on their own grounds, and in order to do so made what we may call a levy on each of the sea-border eounties for the provision of a certain number of ships, or a certain amount of money or men for the upkeep of those slips, to defend the coasts of the country from foreign invasion. Between Alfred's time and the Norman Conquest the 'levied' N. was supplemented by the possession hy the king of royal ships, and during the years which followed the Norman Conquest the principles of feudalism were applied to the lovying of a naval The seaport towns held their charters and privileges in return for men and ships which were to serve the king for fifteen days in the year at the expense of the towns. During the 12th and 13th conturies the fleet of the Cinque Ports was practically the national fleet, but this practically tac national neet, but this rapidly sank into disrepute, and the real royal N. came to he not the feudal array but the mercenary N. In this respect we may compare the national N. and army, since hoth have come down to us not from the feudal array, but from the purely mercenary forces raised at a later date by the later Plantagenet kings. The main nucleus of the royal N. The main nucleus of the royal N., however, was the king's own ships, whiloh naturally were much more under his control than those sent him from the counties. These were con-The crusado of 1190 had result at least of bringing int the English N. the title of although it was not at first used in the supreme sense in which it is used to day, and indeed an admiral in that sense was not appointed until 1360, and a first sea lord, as we know tho title to-day, was not appointed until well into the 15th century. Even during the reign of our weak kings the sovereignty of the seas was retained. In John's reign we have vie-

War also we selden found in easily invading France,

perhaps is the supreme test.

Practically since the time of still remained in existence fluotuated in strength according to the strength or weakness of the reigning king. During the Tudor period the N. increased in strength. Henry VII. added to its numbers, not very greatly, it is true, but nevertheless he laid the foundation for the greater N. which his son was to build. He employed many of the royal ships on merehant ventures also. Henry VIII. took a deep interest in the N., however. He spent at least some propertion of the plunder of the monasteries in raising an effleient fleet, and a fleet which was built on lines for the time absolutely modern. As far as the fleet is concerned the Tudor period was a period of transition, but even during the reign of Elizabeth the N. never became larger than it was dur-ing the reign of Henry VIII. Henry was also responsible for the establishment, of a navy hoard, under the direction of a lord high admiral, and this administrative reform remained in existence down to the time of William IV. in England. The early history of the personnel of the flect shows us that it was regarded very much more as a 'military' force than as anything else. The saliors who navigated the ship were not held of the same importance as the soldiers who defended it. They were also very much in the minority. By the time of Henry VIII. this had to a very great extent changed, nor was it to be wondered at. The era of discoveries had given the ships a very much wider from the counties. These were con-trolled by royal officials, and were entirely at the command of the king. It was necessary now to have a The crusade of 1190 had vessci. The diminished very largely in numbers. Further, the great strides which had been made In the science of navigation made it necessary that the men in command should be trained men, and not merely the favoured nominees of the king. The case of the appointment of a man like Medina Sidonia to the

command of the Armada by Philip II. is a case in point. Further, during tained. In John's reign we have vietories over Philip Augustus, and in the Tudor period the size of the ships Edward III.'s we have the victory at Sluys in 1340, and later over the Spaniards at Winchelsea in 1350. Up Elizaheth was less than that of Henry to this time, at any rate, we had suffered no great defeat, and our claim to sovereignty in the narrow is of vast importance as far as the desease could not easily be disputed, and our retention of Calais for so long a period goes far to prove the provent of the N. is concerned. During the reign of James I. many period goes far to prove the war also we seldom found.

osition of lord aken from the perhaps not so

led a somewhat chequered career much for hueffleiency as for corrup-during the period 1399-1485, but it tion, and given to a commission.

to see that the fleet was officient. Further, the king himself took great interest in the development of the N. and especially in naval construction. This work was continued during the reign of Charles I., and many reforms were made in the matter of the personnel of the fleet which was increased and which received very much better The ships that were constructed were made in good quality, and it may be remembered here that Charles's first levy of Ship Money was omployed for the construction and increase of the N. The strength of the N., however, was still very small, and at the outbroak of war the king had only about forty ships in the N., and these were handed over to parliament by the newly created lord high inent by the newly created ford high admiral at the heginning of the war. During the period 1642-60 the N. passed into the hands of parliament and was controlled by admirals appointed by it. The N., however, dld much good work, and under Cromwell it revived the days when the Everlich deet had been able to the English fleet had been able to claim the sovereignty of the seas. By 1660 the N. had more than trelled in size, and had nearly trelled in tonnage. Further, the naval service was not longer regarded as of necessity a service by pressed men; the admirals of the Commonwealth realised the error of this and opened the service to voluntary servants as well as pressed crews. In view of the ever-increasing trade of England, and the necessity to protect the merchant service, the increase of the N. was essential to tho well-heing of the nation. During the reign of Charles II, the N. did at last become truly national. Officers received a proper training from the time that they were boys, and special corps were founded in order to have an everinoreasing number of officers prepared for the service. The commerce of the country was much more amply protected, and piracy was put down with a strong hand. Up to the passing of the Test Act (1673) the lord high admiral was James II.), and during his provided of admiratorities the N his period of administration the N. was certainly efficient, and he also proved himself a sailor of some note and of good courage. During his period of office, a period of which we learn much from the diarist Samuel Pepys, the N. consisted of ahout 170 ships, with a tonnage of over 100,000 tons, a personnel of 42,000 men, and nearly 7000 guns. This was obviously

Although the N. was not maintained almost entirely into the hands of at a very great strength, these comparison and a very great strength, these comparison and parliament. The title of royal N. was missioners nevertheless took steps still maintained, and occasionally the form of appointing a lord high admiral was gone through, but as a purely royal force the N. ceased to exist. We must remember, however, that it is because the N. was under royal control for so long that it has so expert a continuity of history and that royal coutrol for so long that it has so great a continuity of history, and that it would probably bave often fallen into decay had it not been kept together as a royal force. The N. was controlled by the Navy Discipline Act of 1660, which was, at the end of the War of the Austrian Succession, supplemented by an Act of George supplemented by an Act of George II.'s reign. Few great changes took place in naval construction until the reign of Queon Victoria. Many experi-monts were made, and the ships in-creased in size and in the number of guns which they carried; but it was not until the beginning of the 19th century that real developments began to take place. The first steam warship was constructed in 1814, and since that time experiments have been constantly made, until at the present time we have ships of the type of the super-Dreadnought. Ships began after 1854 to be armour-plated, this being a tribute paid to the ever-in-creasing power of shells. The year 1860 saw the launch of the first ironclad of Great Britain, but this had heen preceded by a vessel of like hulld launched by France in the previous year. Guns were, however, quickly invented which could pierce the armour carried by these vessels, and so later ships had a greater thickness of armour, and carried guns which were powerful enough to plerce through the armour of the opposing The ordinary ironclad was vessels. ahout the year 1862 superseded by the turret ship, and under the direc-tion of Sir E. T. Reed, the constructor of the N., a ship was produced which was capable of firing in all directions from central hatteries, and did not depend entirely upon its broadsides. Turret and mastless warships were now regarded as the latest thing in naval construction, and the turrets carried an armour-plating of from 10 carried an armour-plaung of from 10 to 14 in. thick. The turret ships were in the course of time replaced by ships of the cruiser type. These were armoured and protected, and were speedier than the ordinary line-of-battle ships, hut did not carry so much armour-plating and wero not so well protected. Since 1880 we have had definite programme а of naval construction every year, whereby we base the amount of cona vast improvement on the previous struction necessary upon the amount reign. When the Revolution came in 1688, the control of the N. passed foreign powers. The latest word in

naval construction is the super-amount of progress which has been Dreadnought, ships of from 22,500 made since 1906:—tons to 26,000 tons, with a speed per hour of anything from 21 to 25 knots, Dreadcarrying ten 16-ia, guus and sixteen G-ia. guns, with an armour-plating of 12 in. thickness. If we compare a ship of this type, such as the Zealous, By courtesy of the Navy League which has only been laid down this (q.v.) a comparison of the great Ns. of year, with the original Dreadnought the world is given in the following type, we can easily see the enormous table:-

Knots Armour. Guas. Tons. nought 17,900 21 11 in. 10·12 ia. Zealous 26,000 12 .. 10.16 ..

Vessels	Britain	Ger- many	France	U.S.A.	Japan	Russia	Italy
Battleships All classes	68	37	20	31	19	5	12
Cruisers— Armourcdand otherwise	68	38	16	22	12	. 11	,
Destroyers	154	108	75	34	43	79	22
Submarines	79	24	68	27	15	29	18
Men	146,000	66,000	60,000	64,000	49,000		35,000

tho Caribbean Sca, Central on the Carindean Sea, Central America. It has a fine harbour, and is connected by a breakwater to a small island about 7 m. distant. Quantities of coffee, cocoanuts, and wood are exported. It is a railway

wood are exported. It is a railway terminus. Pop. 5000. Navy Board, The, a hoard estab-lished in the reign of Henry VIII. to superintend the administrative work of the navy. It remained in existence between the years 1546-1832, when it was abolished and its work taken

of advocating the building of an in Sielly, founded 735 n.c., and de-adequate navy for the protection of stroyed by Dionysius of Syraouse in Great Britain and the maintenance of | 403 B.C. sea power. It is on the strictest of non-party lines, and aims at the educating of parliament and the people on the lines laid down in its programmo. It propagates in-formation concerning the navy, past and present, by means of monthly, quarterly, and anaual publications, by icctures, and by the publication of many pamphlets. Sceretary, P. J. Hannen, Esq., 11 Victoria Street, London, S.W.

Naworth Castle, see LANERCOST. sentenced to be Naxos: 1. An Island of Greece in and haprisoned, the Argean Sea, the largest of the Nazarenes, a has an Cyclades (q.v.),

Navy Bay, or Limon, a seaport tn. 175 sq. m. It is mountainous and of New Granada, Isthmus of Panama, icrtile, and produces quantities of wino, for which reason it was chosen as the centre of the worship of It was colonised by the Bacchus. Athenians, conquered by Persia in 540 n.c., and recovered its independence in 471 n.c. In the 13th century it became part of a Venetian duchy, was taken by the Turks in 1566, and now belongs to Greeco. The other products are cotton, grain, and truits; there are graalte and marble quarries. Pop. 16,000. 2. The cap. of the above island, is a port on the N.W. coast and the scat of a Greek and Latin bishopple. Pop. 2000. over by the lords of the Admiralty.

N.W. coast and the seat of a Greek
Navy League, The, an organisanot founded in 1895 for the purpose | 3. The name of the first Greek colony
of advocating the building of an in Sielly, founded 735 n.c., and de-

Nayler, James (c. 1617-60), an English Quaker, born at Ardsley in Yorkshire. He joined the Parlia-mentary army in 1642 and was present at the battle of Duabar, 1650. In 1651 he became a Quaker, and gathering round him a party followers travelled from place οſ to place. Ho was imprisoned in 1653 at Appleby, and again 1656 Exeter, and on his release Excter gaol made a triumphal pro-cession into Bristol, giving out that Nawanagar, or Jamnagar, a sca-cession into Bristol, giving out that port in., cap. of N. dist., on the Gulf he was Christ. He was arrested at the of Cutch, India. The chief manufe. High Cross and brought to trial, and of Cutch, India. The chief manufs. High Cross and brought to trial, and are allk and embroidery. Pop. 54,000. on being convicted of blasphemy was sentenced to be whipped, branded.

namo area of Tertulius (Acts xxiv. 5) to the early

A tn. of Galileo, Palestine, situated about midway between the Mediterranean and the southern end of the Lako of Galilee. It is important only for its connection with the life of Jesus Christ, where His early years were passed in the house of Joseph and Mary. Howover, the traditional sites have no real authority. present town has some 10,000 inhabitants. 2. A tn. of Bahia, Brazil, on the l. b. of the Jaguaripe. Pop. 8000. 3. A tn. in Brazil in the state and 35 m. N.W. of the tn. of Pernambuco. Pop. 15,000.

nambuco. Pop. 19,000.
Naze, The: 1. A cape on the E. eoast of Essex, England, 5 m. S. of Harwich. 2. Or Lindesnas, a cape at the extreme S. of Norway, near the entrance to the Skager Rack.

Nazianzen, see GREGORY NAZIAN-

Nazilly, or Naslu, a tu. of Asia Minor, in the vilayet of Smyrna, on tho R. Menderez, 25 m. N.E. of Aldin. Pop. 22,000. Nazirites, or Nazarites, among the

ancient Israelites those specially consecrated to the Lord, and separated from the rest of the people. The Nazirito vow demanded: (1) Abstinence from intoxicating liquor and from all the produce of the vino; (2) that the hair should not be cut at all but suffored to grow to its full length; (3) avoldance of all ceremonial defilement, such as that involved by contact with a corpse. If the Nazirite yow were taken only for a period of timo, its expiration was marked by a ceremonlal sacrifice. Other N. (e.g. Samson, Samuel, and the Rechabites) were vowed for life.

Neagh, Lough, a lake of Ulster, N.E. Ireland, the largest in the British Isles (17 by 10 m.). It receives the Blackwater and Ballinderry rivers aud is drained N. to the Atlantic through the Bann R. The shores are through the Bann R. The shores are mostly flat and marshy, and its waters have a petrifying quality. There are canals to Belfast, Newry, Tyrone, and Lough Erno. The lake abounds in fisb. The House of Lords refused to recognise the right of public fishing in its waters (1911). There are a few islands in the lake. Area 153 sq. m.; average depth 40 ft. See Moore's ballad Let Erin Remember.

Christians, but later applied to a Jewish Christian seot, better known as Ebionites (q.v.).

Nazareth: 1. (Modern En-Nasira.)

M.A. from the Harvard University being conferred on him. The Hislory of the Puritans, published in 1732-38, was his principal work.

Neal, John (1793-1876), a novelist and poet, born at Portland, Maine. He wrote novels which show considerable native power hut little art, are now almost forgotten. Among those which show the influence of Byron and Godwin are Keep Cool (1818), Logon (1822), and Seventy-Six (1823). His poems have the same features of vigour and want of finish. In 1823 he visited England and become become aud became known to Jeremy Ben-tham. He contributed some articles on American subjects to Blockwood's

Magazine, Neale, John Mason (1818-66), an English divine and hymn writer, born in London. From 1846 till his death he was warden of Sackville College, E Grisstead. He helonged to the extreme High Church party, and in 1854 established at Rotherfield the sisterhood of St. Margaret, afterwards transferred to E. Grinstead. He wrote or translated nearly oneeighth of Hymns Ancient and Modern, and also published several books for and also published several poles for children; a History of the Holy Eastern Church; Mediaval Hymns; History of the Jansenists, etc. See Julian, Dictionary of Hymnology. Neander, Johann August Wilhelm (1789-1850), a German theologian and historian, born at Göttingen. In 1812

he became professor at Heidelberg and the following year at Berlin, where he devoted himself to the advancement of Christianity. advancement of Christianity. He lectured on church history, ethics, and systematic theology, and was the founder of modern church history. His principal work is the General History of the Christion Religion and Church, translated by J. Torrey, and widely circulated in England and the USA Among his other publica-U.S.A. Among his other publications may be mentioned: Memoroble Occurrences from the History of Christianily and Christion Life: The Life of Jesus Christ in ils Historicol Relo-tions: The Emperor Julian and his Times, etc. See Life by Wiegand (1890).

Neanderthal, a valley of the Rhine Province, Prussia, in the dist of Disseldorf, near the vil. of Mettman. Here in 1856 was found the skeletoa of a pre-historic man, whose cranium has formed the subject of much discussion among anthropologists Neal, Daniel (1678-1743), an English historian, born in London. He other skulls, hearing similar characters was minister at an Independent teristics, have been found at ho caves chapel in Aldersgate Street from 1706-43. In 1720 his History of New England was published, which work The skull had a low forebead, was resulted in the honorary degree of large and thick, with large pro

tuherances of the occipital region. It creator of tablet-writing.' Later he is helieved to have belonged to a trog- held rank immediately after Mcrelodyte or primitive cave-dweller, and representative of the earliest delichocephalic or long-headed race in Europe. Some authorities deny that Europe. Some authorities actly make the skull has any simian racial indications, but that the abnormalities were caused by disease during lifetime. See De Mortillet, Formation de la Nation Française, 1897, and

de la Nation Française, 1897, and Taylor's Aryans, 1890.
Neapolis: 1. An ancient seaport of Philippi in Macedonia, the modern Kavalia (pop. about 5000) being near the site. The town was almost opposite Thasos Island. Paul landed here (see Acts xvl. 9-11). 2. The ancient name for Naples in Campania, Italy.
Neap Tides, see TIDES.
Nearchus, the commander of the fleet of Alexander the Great in his

fleet of Alexander the Great in his Indian expedition, 327-326 n.c. He received command of the fleet ordered by Alexander to be built on the Hydaspes, and conducted it from the mouth of the Indus to the Persian Gulf, the whole journey taking from Sept. 325 to Fch. 324. Fragments of his own narrative of his voyage have been preserved in the Indica of Arrian.

Nearetie, see Geographical Dis-

TRIBUTION.

Neath, a parl, and municipal bor. and river-port of the co. of Glamorgan, S. Wales, on a navigable river of the same name, 7 m. N.E. of Swansea. It contains the remains of an ancient castle, and in the vicinity are the imposing ruins of Neath Abbey. There are at N. several copper and tin works. Copper, coal, speiter, iron, and tin plates, and fine bricks are exported. Pop. (1911) 17,590.
Neat's-foot Oil, a pale yellow odour-

less product obtained by boiling the hoofs of neat cattle (a term used to denote all sorts of cattle). It is specially well suited for use as a jubricant, as it does not clog or hecome rancid.

Neaves, Charles (Lerd Neaves) (1800-76), n Scottish judge, horn at Edin-burgh. From 1841-45 he was lordadvocate; from 1845-52 sheriff of Orkney and Shetland, and then Sollcitor-General for Scotland in Lord Derby's administration. In 1853 ho was made n indge in the Court of Session, and in 1858 was appointed a lord of justiciary. He wrote some brilliant satires published in the volume entitled Songs and Verses, Secial and Scientific.

Social and Scientific.

Nebe, Nabu, or Nabium ('the pro-claimer'), one of the chief deities of Babyionia and worshipped nt I.

E-Zida. He w. as the god of patron of prie

dach (Marduk), and was represented as his son, and given a chamber in Marduk's temple, E-Saggila, at Bahylon, whither he was carried in pro-cession on New Year's Day. See Is. xlvi. 1; Jastrow, Religion of Baby-lonia and Assyria, 1898: Deissmann, Bible Studies.

Nobo Mount, or Neba Jebel, a mountain near the northern end of the Dead Sca. with an ait. of 2656 ft.

the Dead Sca. with an ait. of 2656 ft. It was included in Abarim (q.v.), and is referred to in the Bible, Num. xxvii. 12; Deut. xxxii. 49.

Nebraska, one of the N.W. Central States of the American Union. Area nhout 77,500 sq. m. There is much prairie land, a strip of 'Bud Lands' and sandhills (N. and N.W.), and high land in the W. townrds the Roekies, Nichrara Summit and Gabe Roek Nichrara Summit and Gabe Roek Niobrara Summit and Gahe Rock rising over 5000 ft. The Platte and Niobrara are the chief rivers; Omaha (124,096), Lincoln (capital, 43,973), and S. Omalia (26,259) among the chief towns. N. is known as the 'Treeplanter State.' Agriculture is the Agriculture is the leading industry, corn, maize, and whent being the chief cereals. Hogs and cattle are reared. Buildingstones, clays, brown lignite, and sait are found to some extent. What is now known as N. was ceded by France to Spain in 1762 and purchased by U.S. in 1804. N. territory was organised in 1854; the state was dentited to the Union in 1867. These admitted to the Union in 1867. There

aro about ninety counties. Pop. (1910) 1,192,214.

Nebraska City, the cap. of Otoe co., Nebraska, U.S.A., on the Missouri, 40 m. S. of Omaha. There are starchworks, cereal and planing mills, packing houses, at a Pop. (1918). packing-houses, etc. Pop. (1910)5488. Nebraska River, see Platte River.

Nebuchadnezzar, or Nebuchadrezzar, King of the Neo-Babylonian empire; reigned 601-561 B.O. He was the sou of Nabopolassar, and during his reign N. defeated Neeho at Chrchemish. At the beginning of his reign N. had to subdue Jeholakim, who had rehelled against him. Jeholakim was suc-ceeded by his son Jeconiah, and N. now besieged and took Jerusalem and took Jeconiah captive to Babyion. After an unsuccessful attempt on Tyre, N. again laid siege to Jern-Tyre, N. ugain and steps to salem, which submitted after two years. After that he was victorious in Egypt. With him departed the in Egypt. With giory of Babyion.

Nebulæ. The invention of the Assyria, originally telescope led to the recognition of stars invisible to the naked eye. e more powerfui the telescope

ore stars tims revealed. cases cloudy appearances were resolved into clusters of stars, but some clouds did not yield to greator power. Halley, Messiet, and the two Herschels catalogued many. The fact

Herschels catalogued many. Tho fact that they were really cloudy masses 'lender' was findly settled by 'which is not better that they were really cloudy masses 'lender' was findly settled by 'which is not seven in the settle that they was the settle that they was the settle that they was the settle that they was the settle that they was the settle that they was the settle that they was the settle that they was the settle that they was the settle that they was the settle that they was the settle that they was the settle that they was the settle that they was the settle that they was they was they was the settle that they was they was they was the settle that they was they was they was they was the settle that they was the was they was the was they was they was they was they was they was they was they was they was they was they was they was the was the was the was the was the was the was the was the was the was the was the was and the name 'nebulium' bas been given to the unidentified element. Since 1880, when Dr. Draper photographed the N. in Orion, followed by Dr. Common in 1883, and by numer-ous photographs by Roberts, Max Wolff, and Keeler, our knowledge has much increased. Over seventy lines have been photographed in the spectra of half a dozon N., fifty-five in Orion only. The H lines are clear right down omy. The fines are tear right own to the ultra-violet. Andromeda and some other 'white' N. give no lices whatever, just as is given by a gas under pressure, but also by incandescent solids or liquids. So far no parallax has been determined, but Recler (1890) determined velocities of planetary N, from 0 to nearly 40 m. per second in the line of sight. change has been certainly observed in any of the N., though Prof. Holden has noted one in the 'trifid' N. of Sarittarlus. It is generally accepted that N. are of the same order of distance as the stars, and a peculiarity of their distribution is that they are in general remote from the Milky Way. Classification is generally under the heads of annular, elliptic, spiral, and planetary, with the addition of nebulous stars. The larger and highten Way was investigated to brighter N. are very irregular in shape, spreading out in wisps and sprays in all directions, but it is generally considered that the area is accompanied by only slight thickness. The two finest N., those in Andromeda and Orion, are visible to the naked eye.

Nebular Hypothesis, Attempts were development of

evolution from an astronomer

the rotatlo of axis and central bod

du Monde, Lord Kelvin, Prof. Lockyer, and Madm's apple.

Neck, in geology, the name given to or introduced modifications.

Adam's apple.

Neck, in geology, the name given to columns of cooled lava which fill up or introduced modifications.

Necessaries, see INFANT, and HUS-

BAND AND WIFE. · · · ed term in logic imply-

ity when not deduced by restricted laws of formal reasoning. Logically, the law of N. compels us to admit the truth of a conclusion or judgment based by laws of reason on other propositions already accepted; or, more particularly as axiomatic, resulting from the evidence of 'common sense,' Mathematical conclusions are thus necessary; in the latter case, e.g., that two straight lines cannot enclose a space. Among the

d mediæval as extremely advent of

ductive processes, dating from Bacon's Novum Organizm, a vast class of necessary truths has been brought within the realm of logical demonstration, or embraced within the realm of theory, i.e. subject to further investigation. It is, howover, in philosophy and religion wherethe doctrine of N. assumes importance, greater perhaps since the rapid rise of the theory of evolution and its popular exaggeration over too wide a sphere. N. would imply mechanical processes, as it were, in the whole universe; a view generally held to be incompatible with the operations of human and divine will. But for moral N. see Will, Deter-MINISM, KANT, LEIBNIZ, CALVIN, etc.; also Psychology.

Neches, a river of Texas, U.S.A., rising in Van Zandt co. Its course of 350 m. is generally S.E., and it enters Sabine Lake, 15 m. N. of the Mexican

Gulf.

Neck, the portion of the body joining the head and trunk, also a coning the head and trank, also a constricted portion of any structure serving to join its parts. The bony structure of the N. Is the corvical portion of the spinal column, consisting of seven vertebre. The spinal column contains the spinal cord which in the made by Swedenborg and Kant, cervical region is oval in section; the neither astronomers, to explain the amount of grey and white matter bedevelopment of the section of th oomes increased in quantity. The blood is carried to the skull by the right and left common carot id arteries, formulated a scientific theory which, and is returned by the jugular vein, with modifications, remains the only which may be felt a little below and behind the angle of the jaw, after behind the angle of the jaw, after which it penetrates rather more deeply into the tissues. The N. also conveys tion, etc., a solar system such as ours the guillet or food-passage and the might be formed; it explains largely windpipe. The larynx, or organ of the rote formed; it explains largely windpipe. The larynx, or organ of the rote formed; it explains largely windpipe. e, occupies a position where the

dpipe connects with the pharynx, the form of one of its eartilages duces the projection known a

Up these passages er conduits velcanic materials were forced. Ns. are characterised by a more or less circular pipe filled with consolidated ashes, or with crystallino lava. They vary considerably in size, from 20 yds. in diameter to several miles, and may be simple or complex in structure. They occur in all eld velcanle districts, examples existing at Large Law, Fileshiro; Arthur's Seat, Edinburgh; Dumbarton Hill; the Lethians; Derbyshire; in Auvergne, the Eifel, Behemia, St. Lucia (W. Indies, 'the Piteus'), Toxas, California, and many of the W. states of N. America. The famous diamend mines of Kimberley. Africa, are another example, the blue-ground (serpentine breesia) occupying great funnels. See Geikie, Textbook of Geology.

Neckar, a German river, trib. of the Rhine, rising in the Black Forest, S.W. Würtemberg, and winding N.W. past Cannstadt, Ludwigsburg, Heil-bronn, through Baden to Heidelberg and Mannheim, where it jeins the Rhine. Length 246 m.

Neckar-Kreis, ene οť the Neokar-Kreis, ene of the four kreise's er gev. districts of Würtemberg (a kingdom of S.W. Germany, mainly between Bavaria and Baden), in the circle of the Neckar (N.W.). Tho area of the Neckar district (chief tewn, Lndwigsburg) is about 1286 sq. m. The three other districts are the Black Forest er Schwarzwald (Reutlingon), Jagst (Ellwangen), and the Danubo er Donau (Ulm). Neckar wines are noted Pop. Pop. abent 882.570.

Necker, James (1732-1801), bern at Geneva. Sent to Paris in his youth; joined the house of Thelassen, the banker, who teek him into partnorship. In the course of twelve or thirteen years N. realised a large fortune and retired. He then began to aspire to official situations and wrote several works on financial affairs. His Eloge de Colbert ebtained a prize from the French Academy. He afterwards wrete a memolr upon the French finances, which se de-lighted Maurepas that he obtained for him appointment of Director of the Treasury (1776) and Director-General of Finances (1777), when, being averse to impesing new taxes, he endeavoured to make up the de-ficiency in the lucome by ecenemy and leans. In 1781 he published Comte Rendu, which disclosed the state of the revenue and expenditure of France. Being refused a seat at the of France. Being remised a seat at the council, he resigned in 1781, with drew to Switzerland, and wrete Sur PAdministration des Finances (1781).

N. returned to Paris in 1787 and scems to be to attract hesects and thus wrote against Calenne; in 1788, on to scenre cross-fertilisation. N. is

an eld volcanie chimney or crater. I the resignation of Brienne, Louis XVI. appeinted N. Directer-General Finances. His second ministry was short and he retired to Switzerland, but after the taking of the Bastille the ont after the taking of the Busine the result of N., and Leuis complied. He resigned in 1790, and spent lis remaining days in Switzerland, writing political tracts. His daughter the celebrated Madame de was Staël.

Necker, Suzanne Curched, Madame (1739-94), a literary lady, bera at Geneva, Switzerland, neted for her beauty, wit, and wide learning. After her marriage in 1764 to Jacques Necker, her house in Paris was the rendezveus of all the distinguished men of the day. She wrete Re-flexions sur le Divorce, and Mélanges, published by her husbaud after her death. She was the mother of the famens Mme. de Staël. Necklace, Diamend, see DIAMOND

NECKLACE.

Necremancy, a mode of divination practised by the ancients by which the spirits of the dead were conjured up to answer certain questions about the future. In Homer's Odyssey, the shade of Tiresias is brought up and consulted by Ulysses, and the witch of Endor is an example from O.T. history. See Divination.

Necrepelis (GK. respés, and rôle, city of the lead)

city of the dead), a cemetery or bury-ing-ground. The name was formerly applied to cometeries in the vicinity of ancient cities, especially to a suburb of Alexandria, but is now used in a more extended sense for any large burial-ground. Ancient examples remain in Africa (Cyreno and the Egyptian Pyramids), Asia Miner, Greece, and Italy.

Necresis, the death of cells sur-rounded by living tissue, mere properly the death of an aggregation of cells, s constantly ...

of bedily
N. are direct injury, obstruction in
the circulation of the part or incompetence in the nutrilive agencies in
the tissues affected. Cheesy N. is proof bedily duced by the action of the tubercle bacillus. In coagulative N. an amount of fibrin is formed; this occurs in the bleed and en the surface of mucous membranes, where a false membrane may be formed, as in diphtheria. In liquefactive N. the netion of the cells gives rise to the formation of liquid. See also GAN-GRENE.

crystallisable sugar.

Nectar, the drink of the gods, described by Homor as a red wine which Hebo pours out for the immortals (Iliad, xix. 38, and iv. 3). N., in Greek mythology, bad the power of conferring immortality on all who partook of it. The term is applied figuratively to any delicious drink, such as that made from sweet wine and honey.

Nectarine, a smooth-skinned and generally more crimson - coloured variety of the peach which can often be grown successfully outdoors against a S. wall, in a well-drained border of fibrous loam containing a good proportion of lime. Protection at the time of flowering against spring frosts and cold winds is very essential as the flowers appear early and be-fore the leaves. Planting is best done in September; agaiost walls, fan-trained shapes are hest. The culture of Ns. under glass, particularly when grown in pots, is attended with ex-cellont results, if free ventilation and liberal watering are provided, and over-cropping avoided (see PEACH).

Nectary, usually a gland-like honey-secreting hody or disk on the receptacle of a flower, either between the petals or between the stamens and pistils. In some cases the N occurs on the summit of the ovary; in others it lines the inside of the calvx-tubo: and occasionally sepals or petals are modified, and in a few cases (such as the monkshood and hellebore) are entirely converted to serve as Ns. The accessibility of the N. is per-fectly adapted to the structure of the insect or other agent on which the ferti-

lisation of the flowers mainly depends. Nedenäs, an aint of Norway in the prov. of Christiansand, 1s hounded S.E. by the Skager Rack. It is mountainous, and covers an area of 3600 The cap. is Arendal. 76,985.

Nederbrakel, a tn. in the prov. of E.

Flanders, Belgium, 17 m. S.S.E. of Ghent. Pop. 5000. Nederland Steamship Line, The, was established (1870) under a subsidy from the Netherlands Government to carry passengers and cargo between Holland and Java. The company now also has a mail service from Amsterdam via Southampton to Port Said and Suez, and a combination service with the Rotterdamsche Lloyd (from Rotterdam to Java). The fleet consists of some twenty-four steamers,

ra (8300 tons, ring 114,292 ryal Mail Line

has London offices at 60 Haymarket. S.W.: the Nederland Steamship Co. at 2 King William Street, E.C.

Nederlulea, a com. of Sweden, län of

composed of canc sugar and un-| Norrbotten, 12 m. N. of Lulea. Pop. 12,282.

Nederweert, a com. in the prov. of Limburg, Netherlands, 12 m. N.W.

of Roermond. Pop. 5653.

Nedim (fl. c. 1700-30 under Ahmed III.), a Turkish poet of the 18th century, of the Old Ottoman School. His 'ghazels' and 'kasidas' are marked by grace and originality. He was custodian of the library at Constantinople founded by Ibrahim Pasha. See Poole, Story of Turkey.

Nedjed, see NEJD.

Nedrigailov, a tn. in the gov. and 126 m. N.W. of the city of Kharkov, Russia. Pop. 8000.

Needham, a tn. of Massachusetts, U.S.A., in Norfolk co., 12 m. S.W. of Boston, with hosiery manufs. (1910) 5026.

Needham, John Turberville (1713-81), a Roman Catholic priest and physiologist, horn in London and educated at Douay and Cambray. He wrote Idée sommaire, ou Vue générale du Système Physique et Metaphysique de M. Needham sur la

> vork WATE

descended from the Egyptians; several treatises on microscopical science, on

bees and ants.

Needham (or Nedham), Marcha-mont (1620-78), a journalist, horn at Burford in Oxfordshire. He pursued various callings in his youth, but eventually took up journalism. Ho was the ohief author of Mercurius Britanicus (1643-46), a satirical weekly commentary on the news of the day, and was twice arrested for the scurrilous character of the paper. He also published Mercurius Politi-cus, in which he championed Crom-well's foreign and ecclesiastical policy, and edited the Public Intelligencer (1653-60). After the Restoration he lived by practising physic, and published Medela Medicinæ (1665), an attack on the College of Physicians and its methods, and a complaint of the neglect of chemistry for anatomy. His Discourse concerning Schools and Schoolmasters (1663) suggests several reforms in education.

Needham, Walter (c. 1631-91), an eminent anatomist, whose standard work is Dissertatio de Formato Foetu. See Birch, History of the Royal Society.

Needle, Magnetio, see Compass. Needle-gun, see RIFLE, BREECH-

LOADING.

Needles are instruments of metal. or other material, for the purpose of carrying the thread in sewing, em-broidery, kultting, netting, and other similar operations. They are generally made of metal, but bone, ivory, and wood are also nsed; for ordinary

description; for other kinds of work they are often much larger and differently formed, according to the requirements of the work to be done. Needle-making is an important branch of industrial art, and it has attained to extraordinary perfection. The first operation, after the wire has been selected, and its thickness accurately gauged, is to cut it into 8-ft. lengths; this is done by winding it in a coil of 16 ft. circumference, and then outting this coll into exact halves with powerful cutting shears. The colling of the wire is so managed that there are 100 pleces in each half when cut; the bundles of 100 wires are again out into the necessary lengths for two N.; and so well arranged are the cutting shears that a man can easily cutting shears that a man can easily out enough for 1,000,000 N. in a day of twelve hours. The pieces cut from a coil, although now reduced to the length of two small N., are nevertheless somewhat curved; they are therefore collected into hundles of about 6000 and placed in two iron rings, which hold them loosely together; they are then slightly softened by firing, and are laid on an iron plate or bench, and are pressed with a small curved bar in two or three positions, by which the operator manages to by which the operator manages to make them all perfectly straight. They are now taken to the grinder, who sits in front of his grindstone upona scat which is hollow, and forms to reach the stone. an air-shaft open towards the stone; through this a hlast of air is forced when the wheel is in motion, which carries away from the grindor every particle of the subtle dust from the N. points and the stone. Before this N. points and the stone. Before this humane invention, which has rendered the operation quite innocuous, the loss of life in this manufacture was more serious than in any other industrial occupation. The operator, with great tact, holds about twentyfive of the wires, by means of his thumb, pressed against the inside of his fingers, tho wires, which are held straight and applied to the grindstone, being dexterously turned round on the inside of the hand by means of the thumb, until they are ground sharp at one end; they are then reversed, and the other ends are similarly sharpened. They are next taken flattened part by the blow is removed causo any friction on the thread in in the annealing oven, and the holes sewing with them. The N. is now

needle-work they are made of fine are next punched, two in each steel, and are too well known to need flattened portion. These are done by a machine on the same principle as the impressing machine; this not only punches the two boles, but also forms a small cross-cut between them. At this cross-cut the wire is broken in two, and may now be regarded as two rudely-formed N., each having a flattened and plerced head. A number of these are now threaded (spitted) on a thin wire, and are placed in a vice, which holds them firm and atraight, so that the heads can be filed. The next process is oil tempering, for which they are made hot, and immersed in sufficient oil to cont them thoroughly; the oil is then burned off, an operation which renders the N. brittle. They are then welghed out into lots of about 500,000 each, and after being shaken so that they lie side by side, they are laid on a square side by side, they are laid on a square piece of strong canvas, and a quantity of sand and emery-powder heing mixed with them, they are corded up very securely into a long roll from 18 in. to 2 ft. in length. A number of these rolls or bundles are placed on a movable wooden sinb in the securing machine, and over them is placed another heavily weighted slab. The action of the machine, of which theso slabs form part, is to move them backwards and forwards in opposite directions, the buudles of N. acting as rollers, the pressure upon which works the enclosed N., sand, etc., together, so that instead of the blackened appearance they had when it commenced, they are white and sliverymencea, they are white and silvery-looking. They are now removed to an exactly similar machine, where they are polished. Here they are separated from the sand and omery, and are removed to other canvas squares; and when inixed up with a paste of putty-powder and oil, are again corded up, and made to roll backwards and forwards under the verigitated wooglen slab of the polishing weighted woeden slab of the polishing machine for four hours more. noxt process is to remove them from the canvas and agitate them in a vessel with soft soap and water, to remove the oil and putty-powder, and remove the oil and putty-powder, and next to dry them in ash-wood sawdust. They are now highly polished and well tempered, but not all of oxactly the same length, nor are the oyes perfect; they are therefore passed to a person who, by nice management of a small gauge, sorts them very quickly into certain lengths (evening), and arranges them all in one altrefield. to the impressing machine, which in to a person who, by nice management principle consists of a weight hanging of a small gauge, sorts them very to a block, which is raised by the hand and let fall at pleasure; the wires are placed in succession under this, so that the falling weight strikes each drilled, an operation requiring great wire exactly in the middle, and there all the properties of the tables of the properties of the tables are policied, as person who, by nice management of a small gauge, sorts them very quickly into certain lengths (exening). The hardening of the to be so polished all round as not to

of the

operations are considered necessary to produce high finish. The wire of which the ordinary-sized N. is made which the ordinary-sized N. is made is so thin that 5½ pounds go to form 74,000 N. Of ordinary sized N., 2,250,000 weigh 3 cwt. English-made N. are the best in the world, and are objectly made in Redditch and the neighbourhood, where, and in other parts of the county of Worcester, this manufer employes a large number of manuf. employs a large number of For the varieties of N. used for entering wounds, etc., see SURGICAL APPLIANCES.

Needles, The, the name given to five remarkable rocks lying immediately off the western extremity of the Isle of Wight in N. lat. 50° 39′ and W. long. 1° 34′. Their origin is attributable to the sea heating on the sharp cliffs which form the W. point of the island, and the same influence is gradually wasting them away; the largest of them, which was 120 ft. in hoight, having been submerged in 1764. They are white, but black at their beauty and the submerged in their beauty are white but black at their hases, and ouriously streaked throughout with black strata of flints. A lighthouse standing on this extremity of the island rises 715 ft. above the sea.

Neefs, Peter (c. 1570-1651), surnamed the Eldor, a Dutch painter, born at Antwerp. He excelled in representing the interiors of Gotbio churches and convents Illuminated, his 'Cathedral of Antwerp' especially being considered a masterpiece. His pictures are to be seen in most public calleries. His son, Peter public galleries. His son, Peter Martin N., although not equalling his father, imitated his style.

Neenah, a city and summer resort.

Wisconsin II.S.A.

of Winnehago co., Wisconsin, U.S.A., on Fox R., N.W. of Lake Winnehago. It has machino shops, foundries, and paper-mills, and manufs. hoots and shoes and agricultural implements. Pop. (1910) 5734.

Neepawa, a seaport tn. of Manitoha, Canada, 17 m. S.E. of Minnedosa. Pop. 2000.

Neer, Arnold van der (c. 1619-33), a Dutch landscape painter, horn at Amsterdam. He was particularly was particularly successful in rendering moonlight effects among the canal scenery of Holland, and in painting winter landscapes, with skators on ice introduced.

Neer, Elgon Hendrick van der (1643-1703), son of Arnold, born at Amsterdam. He was a pupil of Vanloo, and hecame celebrated as a painter of his-

torical pieces, landscapes, etc.

Neerwinden, a vil. of Liège, Beigium, 5 m. S.E. of Tirlemont It was the sceno of two battles fought in 1693 and 1793. Pop. 650.

Ne Evert Perme.

Ne Exeat Regno. At common law arises only where a duty is owed to (q.v.) every subject may go out of the person aggrieved. The standard

practically finished, but many minor the realm whenever and for whatever purpose he pleases; but because constitutionally every man ought to de-fend the realm, the sovereign bas tho prerogative (see under CROWN) of commanding him by the writ of N. E. R. not to leave the country, on pain of punishment for disobedienco. This ancient writ was originally used to prevent the elergy from going to Rome, and was afterwards extended of oonstatc.

> ourt by virtue of which ball (q.v.) may be ohtained from any person about to go abroad with the object of evading the jurisdiction of the court. The legality of this application of the writ was settled in the time of Charles 11., and the oranting of it has long been consid

mi na

labouring successively III Quality Neufchatel, Berne, the Pays de Vaud, and in the valleys of Queyras and Freyssinières. Sec A. Bost, The Life of Felix Neff, 1855. Neti of Erzerüm (f. 1603-7 under

Ahmed I.), a Turkish poet and writer of hrillant 'kasidas' (culogies). His ability as a satirist won him onemies, who prevailed on Murad IV. to have

him executed (1635).

Negapatam, or Nagapattanam, a seaport of Mudras, India, one of the earliest Portuguese settlements on the Coromandel coast It is in the delta of the Cavery, 48 m. from Tanjore. Oil and textiles are manufactured, rice and paddy exported. The Great Southern Railway of India has ex-N is an imtensivo portant Pop. 'oliam-57,000 medans).

Negaunee, acity of Michigan, U.S.A., m. S.W. hy W. of Marquette, with several blast furnaces. (1910) 8460.

Negligence. In English law the commonly accopted definition of N., which is a tort (actions ble wrong) remediable by an action of damages, is that it is the omission to do something which a reasonable man, guided by those considerations which ordinarily regu-late the conduct of human affairs, would do, or doing something which a prudent and reasonable man would not do. The two cardinal facts of importance about N. are that it denotes a standard of conduct and not a state of mind, and that liability from it arises only where a duty is owed to of care or 'diligence' which the English common law requires from a person in a particular transaction, though it may vary with the degree of skill ordinarily to be expected from any person similarly circumstanced, bas no relation to psychological con-sideration of motive or intention, for it is purely objective. Roman law in this respect was wanting in its usual consistency and practicability. In that system there were, as in the English law, degrees of N. or carelessness, but pe'

òί. standard of care of an ordinary bonus palerfamilias (head of an agnatio family) was enacted, whereas in others, e.g. where the othor person to this contract got the benefit from it, a merely relative standard of care was sufficient, for provided the re-

his · The . accustoned to hestow on matters affecting himself is not one which is not one which is point to the solution of the point

be unjust to do so; for the latter ordinarily knows nothing of the other's idiosyncrasies, and is morally justified in assuming that the other will act like the average man in like circumstances. In regard to duty, liability for N. may arise from the breach of a duty owed individual, or to all In the fc. criminately.

to some fiduciary (e.g. trustee and) beneficiary), parental, or tutelary (guardian and ward) relationship, or exist by reason of a purely contractual relationship. In the case of N. manifested in the performance or omission to perform the terms of a contract, difficult questions arise as to whether the injured party should sue in contract or being th.

the former care up by whe may be reasonably supposed to have sustained as a proximate consequence of the breach (q.r.), but in the latter case he may get anything a sym-pathetic jury sees lit to award. In regard to duties 'oved to all the world,' it is to be observed that these are necessarily of a restricted nature. for, as has been observed, 'the law does not and cannot undertake to make men render active service to their neighbours at all times when a good or a brave man would do so.' exchange, horrowed from the bills of The bond of duty in most encourage.

the courts have held it to exist, will be found to depend really on an antecedent voluntary sot of the party heid liable (Pollock, On Toris); c.g. if I observe a cart and horse, the driver of which (a personal enemy of mine) has temporarily left it unguarded, proceeding to the brink of a steep cliff, I am not liable for damages for N. because I did not take the trouble to stop the horse from walking over the cliff, for it was not by any voluntary act of mine that the horse happened to stray. But if, e.g., I choose to run motor buses or any other vehicle along the streets, I am responsible for any injuries sustained responsible for any nature sale therefrom by passers by which a jury or judge of fact is satisfied were due solely to the N. of my drivers. This solely to the N. of my drivers. This example is useful to lilustrate the meaning of 'contributory' N.; a a merely relative standard of care incuming of the control of the care incuming of the care incuming of the care incuming of the care incuming of the care incuming of the care incuming of the N. of another will to recover a farthing if,

ing the other's N., he ing on an inquiry of the amount of parameters. at the decisive or last care any particular individual is moment in the transaction, have by accustomed to bestow on matters the exercise of reasonable care and prudence averted such injury or less. It is commonly said that N. is divisible into gross, slight, ordinary, and so forth. But the division is unsound and illogical. No doubt what would itwould forth. be gross N. in a bus driver would be usually far less so in the case of an inexpert man who was learning how to drive. But his won't affect the liability, for the law requires the standard of care or skill of the expert a case where special skill is rese where appeared; though, of to be expected; though, of

personal duty may either be incident inexpert driver would probably ineur no liability if, e.g., he were a passenger who had tried to stop a hus in the

sudden illness of the regular driver.

Negombo, a tn. of Ceylon, on the
W. coast, 20 m. N.W. of Colombo.

Pop. 29,000. Negotiable Instrument. The distinguishing features of a N. I. arc. (1) it can be sued on by the holder in his own name: (2) the holder in duo or preit passes e holder in duo coursels not affected by certain defences which might be available defences which intend be syntable against prior holders, e.g. fraud, undue influence, provided he himself were no party to suell viliating element. Tho law of N. Is, depends mainly upon statutes which themsolves have been framed exclusively on the custom of merchants. The

latest additions heing dobenture bonds payable to bearer. In tho majority of cases It is essentially a question of fact to be proved by evidence whether or not a document is negotiable, though in cases where the negotiability is established, the court takes judicial notice of that fact, i.e. recognises it as a matter of law. The following documents, in addition to those already mentioned, are N. Is., hank-notes (see also CURRENCY), cheques, exchequer bills, dividend warrants, East India honds, circular notes, certain scrip and bonds, e.g. debenture scrip and various American railway bonds (as to the marks of a valid oustom see under that title). The law of N. I. in so far as bills of exchange, promissory notes, cheques, and bank-notes is concerned has long been codified in the Bills of Exchange Act. 1882. Postal orders are not negotiable if crossed for collection by a bank, though otherwise they can be freely transferred from hand to hand; nor are share certificates, share warrants, and share transfers, henco the forgery of the true holder's signature will not affect his rights; nor an I.O.U. (q.v.); nor most kinds of scrip and honds. Bills of lading can he transferred so as to give the transferee a right to sue in his own name, but otherwise they are not N. Is., because the transferee gets no better titie than that of his transferor; and the same observations apply to policies of assurance. The holder in due course of a bill of exchange or any other N. I. is he who takes the to instrument in good faith or without knowledge or notice of previous defects of title in it, and gives valuable consideration (see under Considera-tion) for it. But a holder is not put to the trouble of proving considera-tion unless the party resisting liability on the instrument established the on the instrument established the existence of some defect, e.g. fraud, duress, in the previous negotiation of the instrument. Sometimes bills or other N. Is, are marked 'not negotiable.' The effect of this is that the person receiving it will not have, and is not capable of giving, a better title to the instrument than that which

In the middle ages, and, though much port, Port Diokson, which is conlater, promissory notes. The list of nected with the capital, Scremban. N. Is. tends to increase, one of the lya railway 24½ m. In length. Agriculture is the main industry. Tin isworked in considerable quantities, and large numbers of elephants. buffalors, and other cattle are reared. Area, 2600 sq. m. The pop. (ahont 120,000) consists of Chinese, Malays, Tamils, Europeans, and Eurasians.

Negrito, or Negrillo, the name-originally applied by the Spaniards to the negro-like inhabitants of the Philippine Ia, an aboriginal race, somewhat dwarfed, inhabiting the mountains. They are of an extremely low type, having no dwellings, living on wild fruits and roots, and on animals they can procure with their only weapon, the how and arrow.
They are devoid of arts, wear no clothes, and their religion is of the lowest. With the immense growth of knowledge of races during the last forty years, the name has been extended to cover many other peoples, as well as some represented by remains found in Central and Western Europe from the stone age. Itesides the Aëtas or Philippine Ns., there are many tribes scattered over the mountainous regions of the Malay Pen-insula, such as the Jakuns, Sakais, and Samangs, the Andaman islanders or Mincoples, who are much purer than the others who have intermixed with the Malay races. These form the eastern division of the race. In Africa there are several tribes inhabiting the oquatorial forests and the mountainous regions round the great lakes; the pygmles of the Congo and Ogoway. Among these are the Wochua and Akka, inhabiting the hasin of the R. Welle, N. of the Congo: the Batwa, about the R. Kasa and its tributaries; the Obongo, in the western forests of equatorial Africa; in Masailand the Wandorobe, and in S. Galla-land the Dume. As in the case of the negroes, this race appears to have spread originally over the Indo-African continent, dua won merged. There is marked likeness to the negro in colour, nature of the hair, protruding jaws; thoy are, however, of low staturo, 3 ft. 6 in. to 4 ft. 10 in., and heads. In they show negro, but

to the instrument than that which the person from whom he took it had. But though the true owner is thus proteoted, the negotiability of the instrument is not otherwise affected. Negri Sembilan, one of the Federated Malay states under British protection. It is situated on the western side of the Malay Peninsula, and has the Straits of Malacea for its western boundary with a coast-line of about 29 m. There is, however, only one

are largely

Strails Branch, 1878; L. Wray, 'The Cave-dwellers of Perak,' Jour. Anthrop. Inst., 1897; Tyson, Essay concerning the Pygmies of the Ancients, 1894; A. H. Keane, Man, Past and Present, 1900; W. Junker, Travels in Africa, 1900-2; W.A. Reed, 'Negritos of Zambalcs,' Philippine Ethn. Survey, vol. ii, 1901; G. Herra vey, vol. ii. pt. i., 1904; G. Hervé, Crânes Néol. Armoricains de Type Négroido,' Bol. Soc. d'Anthropologie,

Negro, Rio: 1. A river of Argentina formed by the union of the Limay and Neuquen Rs., which rise in lakes in the Andes. It flows E. and S.E., and after a course of 400 m. enters the Atlantic 2. A river of S. America, rising in Colombia, under the name Guainla. It flows E and S., joining tributary Amazon as Manáos. It is navigable for steamors about 450 m.; for canoes 680 m. Total length about 1400 m.; breadth

11 to 15 m.

Negroes form one of the four great classes of the human race. In their purest form they are probably found along the Guinea coast, in the Gaboon, the basins of the Shari and Benna, and the lower Zambesi; but the Sudan is considered the home of the race. It is possible that they peopled Schlater's 'Lemuria,' a continent covering a large portion of the Indian Ocean, and became divided on the subsidence of the region in early and middle Tertiary times. The term is now generally restricted to the western or African branch, those of the eastern region, of S. India, Malay, New Gulnea, etc., being Papuens or Malaysians. The former present various mixed types due to Caucasian migration, the latter havo been affected mostly by Mongolian move-ment. The N. characteristics are deep brown, almost black, skin, cool, relvety, and emitting a peouliar odour, short, black woolly hair of elliptical section; short, flat, broad, snub nose with depressed base and dilated nostrils; black eyo, black iris, and yellow selerotle coat; prognathlo jaws, faclel angle 70°; thick lips, pro-truding and showing the liner red; · very

· Zuropean, 45); long arms, weak legs; flat, broad foot with low Instep, and ' lark heel; yellowish palms and soles; height (average 5 ft. 10 in.) above the A marked feature is the early closing of the cranlel sutures, a premature ossification appearing prevent a full development of the brain. The children are described as sharp, vivacious, and intelligent, but deterioration commences at puberty, and the full-grown N. remains oblid-

like, unprogressive, icthargic, without initiation. In the arts, e.g. building, spinning, woaving, pottery, agriculture, the working of motals, they ore moderately advanced, but have pro-bably learnt these under Semitic influence and have certainly shown no development of their own. religion was very debased and cruel, fetishism, cannibolism, and slavery being the chief characteristics and outcomes, but they are now largely In U.S.A.

eptance childish in nature, and their moral status appears unable to rise to the Christian Ideal. They have been Christian Ideal. They have been described as non-moral, rather than immoral, which aptly expresses their undoubted lower stago of develop-They are childishly gay, and passionate, with childles rapidity in change of mood; thievish, unrollable, indolent, yet with a childish sub-ordination to authority, and marked faithfulness, yet subject to sudden failure. These points of character united to a marked sensuousness render them a serious social problem in the more progressive and civilised iands, particularly in America. Their republic, Hayti, has always had an evil name. The Negrold race is estimated at some 200,000,000. United States there are about

-nt oue-ninth of hey are more For language ETHNOLOGY.

See E. B. Tylor, Anthropology, 1881; A. H. Keane, Man, Past and Present,

The Story of H. Johnston, World, 1910;

Sir Spencor St. John, Hapli, or the Black Republic, 1884; A. B. Ellis, The Tshi, Eve, and Yoruba Specking Peoples, 1887, 1890, 1894; F. G. Ruffl, Proptes. 1887, 1890, 1894; F. G.; Ruffl, Negro Education in Virginia, 1889; De Quatrefago, Les Races Humaines, 1882; G. Schweinfurth, Heart of Africa (trans. 1873); F. L. James, The Wild Tribes of the Sudan, 1883; Captalu Bingor, Du Nifer au Golfe de Guinte. 1892; Dr. W. Junker, Travels in Africa, 1886; Dr. J. W. Gregory, The Great Riff Valley, 1896; M. Dybonski, Le Naturaliste Le Naturaliste Short History . '

1913; and for r Philadelphic 1 . by Professor I

University of 1

Negros (formerly Buglas), an Island of the S.W. Visuyas group. Philippines, between Celiú (S.E.) and Panay (N.W.), with the active volcace. Mt. Malaspina or Canlaon (c. 8200 ft.). The mountain-ridge forms a cootinua-

tion of Mindanao (Dapitan). Sugar cane, coffee, tobacco, and grain are produced, sugar-sacks, cahonegro and abaca manufactured. Bacolod and Dumaguete, capitals of the Occi-

Negus, the name of a drink consisting of wine (especially port) mixed with hot water, spiced and sugared.

Nohoim, a tn. of Prussia in West-phaba, on the Ruhr, 20 m, S.E. of Dortmund, Pop. 10,919. Nehemiah. The book of Nehemiah is closely connected with that of Ezra, and in the Jewish canon the two form a single hook under the name of Ezra. It falls into three main divisions: (1) Chaps, i.-vii., written in the first porson, tell how N., cup-bearer to Artaxerxes, learnt of the condition of Jerusalem, obtained leave to visit it and set ahout its restoration; (2) chaps. viii.-x., written in the third person, deal chicfly with the actions of Ezra in restoring the observance of the law; (3) chaps. xi.-xiii., deal with various additional subjects, providing various lists of people and places, and giving N.'s account of the dedication of the walls. The whole book is a compilation from various sources made somo long time after the events which they narrate.

Neile, Richard (1562-1640), Archbishop of York, horn in Westminster. Having taken his doctor's degree in divinity in 1600, he hecame in 1605 Dean of Westminster. In 1608 he was made Bishop of Rochester, and appointed Laud his chaplain, and in 1610 was translated to Lichfield, removing to Lincoln, 1614, Durham, 1617, and Winohester, 1628. He sat regularly on the High Commission and in the Star Chamber, and in 1631 was made Archhishop of York.

Neilgherry Hills (S. India).

NILGIRI HILLS.

Neilson, James Beaumont (1792-1865), inventor of the hot blast in tho iron manufacture. born near Glasgow. As manager and engineer of the Glasgow Gasworks, he introduced many important improvements in the manufacture of gas, and also exerted himself for the mental and technical improvement of thoworkmen under him, establishing a workman's institution. But his great invention was the het blast, and to this he was led by the discovery that a hot blast substituted for a cold one produced three times as much iron with the same amount of fuel.

Neilson, Julia (b. 1869), an English actress, born in London. She made ther first appearance at the Lyceum theatre in 1888 in Pygmalion and Galatea. Under Rutland Barrington's Dumaguete, capitals of the Ocei-Galatea. Under Rutland Barrington's dental and Oriental provinces, are the management at the St. James she chief towns. Area 4840 sq. m. Pop. 460,000.

Negûs, a title of a king or ruler in Ahyssinia, the emperor being 'negûs nagasti' (king of kings). In the last two centuries the rulers of Amhara two centuries the rulers of Amhara well as appearing on the London have claimed it. heing universal favourites. achioved marked success in The Dancing Girl; Sweet Nellof Old Drury; as Rosalind in As You Like It; as Ohcron in A Midsummer Night's Oneroll in A Mashamer Myn's Dream; in Sunday; The Scarlet Pimpernel; Henry of Navarre; The Popinjay; and various other rôles. Her son and daughter arc both on the stage.

Neilson, Lilian Adelaide (c. 1848-80), Neilson, Linan Agelauu (c. 1040-00), an assumed name of an English actress, Elizaheth Ann Brown, also known as Lizzie Bland (Bland being her stepfather's name). She mado her début at Margate (1865). Her most celebrated rôle was that of Juliet, and in 1870 she scored a success in London as Amy Robsart in a dramatic version of Kenilworth, and also played Rehecca in *Ivanhoc*. Sho was popular also in America, appearing at Booth's Theatre, Now York (1872). See Marston, Our Recent Actors, 1890.

Neilston, a par. and tn. of Scotland. in Renfrewshire, on the Leven, 9 m. S.W. of Glasgow. There are bleachields, print-works, and cotton spinning mills. Pop. (1911) 15,214.

Nelsse, a tn. of Silesia, Prussia, on the Glatzer Nelsse, 30 m. S.W. of Oppeln. It was formerly the chief

town of a principality, and the residence of a hishop; the episcopal palace is now used for nunicipal offices. There are manufs. of firearms, machinery, furniture, hlankets, lace, etc.; stone is quarried. Pop. 25,937.

Neid, or Neild (highland), a plateau region of Arahia, N. of the tropic of Cancer, between El Hasa and Hedjaz. The greater part consists of sandy desert, but where water is found the soil is fertile, and sheep and camels are reared. The chief towns are Riad,

Oneise, and Bercide. Pop. 720,000. Nekrasov (or Nekrasoff), Nikolai Alexeievitch (or Alexeyevitch) (1821-c. 78), a Russian poct and Nihilist. He owned (1847) and conducted the monthly magazine Sovrementik (The Contemporary), by means of which Nihilistic opinions were spread among the students of St. Petersburg University, and The Annals of the Fatherland. In 1840 he published Dreams and Elves. Other poems are: Peasants' Children: Russian Women: Hero for

an Hour; Who li Russia? Last Songs. Who lives happily

Nélaton. Auguste

(1807-73), French surgeon, professor of olinical surgery in the Faculty of Medicine at surgery in the Faculty of Alcedone at Paris (1851-67). He was a very skilful operator, and invented 'Nélaton's prohe,' used in searching for hullets. He was surgeon to Napoleon III. His chief work is Eléments de pathologie chirurgicale, 1844-61 (2nd ed. 1863-85).

Neledinsky-Meletzky, Ynrü (1751-1829), an eminent Russian soldier and poet. He served in the campaigns against Turkey from 1770-74, and after peace was concluded joined the Russian emhassy in Constantinopic. He wrote a considerable number of songs and hailads which have con-

siderable charm. Nellore, or Nellur (ancient Sinhapur, lion city), cap. of N. dist., Madras, India, on the R. Pennar. In the neighbourhood are saltpetre refineries. Cotton textiles are manu-

factured. Pop. 33,000.

Nelson: 1. A municipal bor. of Lancashire, England, 3½ m. N. of Burnley. There are coal mines in the Burnley. There are coal-mines in the vicinity, and the staple industry is the vocton manuf. Pop. (1911) 39,485.

2. A provincial dist. of New Zealand, in S. Island, with an area of 10,468 sq. m. It is extremely rich in iron, lead, copper ores, gold, and coal, and its agriculture is considerable. The cap., Nelson, founded in 1841, stands on Tasman Bay. It possesses a fine harbour, accessible to vessels drawing 18 ft. of water. The manufare scap, leather cloth, etc., and aro soap, leather, cloth, etc., and there are breweries and jam factories. Nelson is the see of an Anglican bishop; there is also a college connected with the University of New Zealand. Pop. of dist. 43,000; of tn. 9000. 3. At n. in the S.E. of British Columbia, Canada. It stands on the W. arm of the Kootenay Lake, and is the chief town of the silver-mining the chief town of the silver-mining district of W. Kootenay. The town was incorporated in 1897, and there are fine schools, churches, etc.; smelting is the chief industry; there are Pop. with suburbs, 7500.
Nelson, Heratic, Viscount Nelson

Nelson, Heratic, Viscount Nelson (1758-1805), a British admiral, born at Burnham Thorpe, Norfolk; entered the navy at the age of twelve, and within eight years had attained to the state of the control of the state to the rank of commander. Iil-health threatened to interfere with his career, for In 1780 he was unable to take up a command, but a rest in England did him good, and in the following year he was well enough to accept an uppointment to the Albemarle. He cruised for many months without any particular success, but gave satis-

in officer, and earned the approval of Lord Hood. He was placed on half-pay in 1783, but not long after was appointed to the Boreas, and went to appointed to the Boreas, and went to the W. Indies, where he captured five ships engaged in irregular trading, in defiance of the instructions of Sir Richard Hughes. In 1785 at Nevis he married a young widow, Mrs. Nesbit, and returned to England. He and his wife now lived with his father at Burnham Thorpe for some years, and it was not until a war with France was threatened in 1793 that he was civen the command of the Agamemgiven the command of the Agamemnon, in which in August he conveyed troops to Naples, where he became acquainted with the English minister. Sir William Hamilton, and his beautiful and notorious wife, Emma. In the following year the commander-in-chief, Lord Hood, attacked Corsica, and gave N. the command of the landing party. N. was successful in the operations at Bastia and Calvi, but at the latter engagement lost the sight of one eye. He was promoted commodore in 1796, and in the following year, for his share in the victory off Cape St. Vincent, was raised to the rank of rear-admiral. In the same year in an engagement he lost his right arm. For his successful attack on the French fleet in Aboukir Bay (1798) he was erented Baron Nolson of the Nile. His attachment to Lady Hamilton was now very strong, and he was at Naples whenever he could possibly be there, Sir William Hamilpossibly be there, Sir William Hamilton proving himself a most complacent husband. After his return to England in company with the Hamiltons—a return necessitated hy ill-health—N. and his wife separated. In 1801 he was promoted vice-admiral, and was in command of the attack on Copenhagen, and for his services was raised to the directly of a viscount. raised to the dignity of a viscount. Ho lived with the Hamiltons in London, and at their country-house, and after the death of Sir William in 1803 continued his intimacy with the widow. It is only fair to state that Lady Hamilton told Lord Minto that Hady Frantions were plated with their relations were plated. 'Lady Hamilton,' he wrote, 'talked very freely of her situation with Nelson, and of the construction the world may and of the construction in world may have put upon it; but protested that their attachment had been perfectly pure. However, she bore him two children. In May 1803 N. was appointed to the command of the Mediterranean fleet, and made the Victory his flagship. He lay off Toulon in the hope of the French fleet coming into the open, and so being able to engage them. Napoicou's plan was for the French and Spanish fleets to meet in the W. Tullog and the second the second to the beautiful the second to the second t the W. Indies, and there combine into factory proof of his ability as an an overwhelming striking force. Vil-

leneuve, now in command of the French fleet at Toulon, managed to ovade N., but a storm drove him back to the shelter of the forts; but later he was able to get away, while N. was delayed at Maddalena by contrary winds. He eventually, on Oct. 21, engaged the allied fleets off Trafalgar, and shortly before the action began, hoisted from the flag-ship the famons signal, 'England expects that every man will do his duty.' The victory was complete and decisive, but when the fate of the action was determined, N. was shot down on his quarter-deck and died a few hours later. 'Remember, I leave Lady Hamilton and my daughter Honoria as a legacy to my country, he said, as he lay dying. His last words were: 'Thank God, I have done my duty.' His body was I have done my duty. His body was brought home, and, after lying in state at Greenwich, was publicly buried in Westminster Abbey on Jan. 6, 1806. There are many memorials to him, the most notable being the lofty monument in Trafaigra Square, London. He was one of the greatest, if not the greatest, of British naval commanders, and his brayers and skill were beyond all bravery and skill were beyond all bravery and skill were beyond all question. There are many biographics, the best being that by Clark and McArthur (1840), the most popular that by Robert Southey (1813). His despatches and letters have been edited by Sir Nicholas Harris (1844-46). J. C. Jeaffreson's Lady Hamillon and Lord Nelson (1888) is valuable. Nelson, Robert (1656-1715), an English philanthropist and religious writer, born in London. In 1680 he

writer, born in London. In 1680 he was elected to the Royal Society; in 1691 he became a nonjuror, and an active supporter of the S.P.C.K. and S.P.G. His chief works are: Transub-S.F.O. His called Works are: Transito-stantiation contrary to Scripfure, 1687; Companion for the Festivals and Fasts of the Church of England, 1704; and Life of Dr George Bull, 1713. See his Life by C. F. Secretan (1860).

Nelson Lines are run by Messrs. H. and W. Nelson, Ltd., who had in 1889 instituted a cargo service between England and Buenos Ayres. Their Their fleet consists of fourteen steamers. aggregating 79,080 tons, which run weekly from London to Monte Video and Buenos Ayres, and fortnightly from Liverpool.

Nelson River, a riv. of Canada, flowing from the N. extremity of llowing from the N. extremity of Lake Winnipeg, which after a course of over 400 m. in a generally N.E. direction, empties its waters into Hudson Bay at York Factory. It is navigable for nearly 130 m. for vessels of moderate draught.

Nelsonville, a vil. and the centre of

a coal-mining dist. in Athens co., Ohio, U.S.A. Pop. (1910) 6082.

Nematodes, Nematoidea. Threadworms, or Round-worms, an order of unsegmented round-worms with a mouth, a swollen gullet, and a digestivo canal running tho whole length of the body. They vary in size from Eustrongilus giags, of which the female exceeds a yard in length, to the very minute Heteroderas, parasitic on plants and less than 25 of an inch. They are mostly unisexual, the They are mostly unisexual, the females being by far the commoner and larger; the latter are oviparous or viviparous. In some N., notably the Strongyle, which causes 'gapes' in chickens, the male is attached to the female, the whole resembling in form the letter Y. A large proportion of N. are parasitic in animals, including men. Triching spirilis enters cluding men. Trichina spiralis enters the human system from badly cooked pork, and millions of the worms of this species have been found in the body of a mau. Many N. are the causes of very heavy losses amongst domesticated animals. Apart from intestinal N., one of the most serions parasites is Strongylus micrurus, which causes verminous bronchitis (' husk') or 'hoose') in ealves that are put out during the autumn months on wet pastures. This and many other para-sitic worms are checked or eradicated by the presence of salt in the soil. that are parasitic on plants have been a good deal investigated in recent years. With a retractile spear-like process in the head, they are able to force themselves into young plant tlssue, where the irritation due to their presence causes abnormal development, most marked when it occurs in the root. One of the most serions is Heterodera radicicola, which causes root knot disease in tomatoes and cucumbers, and which for a time threatened to make their culture impossible in certain districts. It is now possible in eertain districts. It is now controlled by heating the soil used for these crops by steam, which kills the N. and has the additional advantage of greatly improving the mechanical condition of the soil. Another N. is responsible for much of what is called 'clover siekness,' and yet another is the cause of much loss in the wheat crop, the trouble being known as 'car cockles.' Closely allied to these, and familiar by their wrigging movements, are the tiny white gling movements, are the tiny white 'eels' found in paste, vinegar, fungi, and animal exercta. Many of them, both in the adult and egg stage, are possessed of extraordinary vitality, which explains much of the mystery of their apparatus in supposedly. of their appearance in supposedly inaccessible places. & FILARIA, and TRICHINA. See ABCARIS. Nematus, see SAW-FLY.

Nemea, the ancient name of the valley of Argolis, between Cleonæ and

Phlius in the Peloponnesus. In it Bender, Untersuch über Nemesius. were celebrated every two years the 1898. Nemean games of which Pindar sang tained a sacred grove, and a temple with a white centre or eye.

to Zeus. Nemean Games, one of the four great national festivals of the Greeks, held at the beginning of the second and fourth year of each Olympiad at Nemea in Argolis. There were the usual athletic contests, horse-racing, and a competition for players of the eithara; palm branches and crowns of parsley were bestowed on the victors. They were celebrated under the presidency of Cleonæ, Argos, and Corinth in turn.

Nemertea, a subdivision of unsegmented worms allied to, and by some authorities arranged among, Platy-helminthes, tho fiat-worms; and it has been suggested that remote an-cestors of Nemertean type had a part in the evolution of vertebrates. They are long, ribbon-shaped animals. They have a straight intestine and a retractile proboscis. Most of them are marine, but a few occur in fresh water and a few also on land. It is doubtful whether any are true parasites. The colours of many of them are bright and varied. The generative organs are very simple; ciliated embryos are produced from eggs, and an interesting metamorphosis occurs to the adult form.

Nemesianus, Marcus Aurelius Olympius (fl. c. 280 A.D.), a Roman poet, born in Carthage, who lived under the relgns of Carus and his sons Carinus and Numerianus. He wrote poems on hunting, De Venatione, and Gynegetica; on fishing, Halientica; and on aquaties, Naulica. See Bahrens, Poeta Latini Minores (vol. ill.), 1881.

Nemesis (Gk. Νέμεσις, distributions

indignation felt at all disturbation proportion, punishes arrogan boastfulness aecompanying one of the ordinarily good fortune, and things oneo more within normalist was localized to be the bounds. She was also called Adrasovide of a metal didymium. Didymium was, however, split up into two mium was, however, split up into two camponents. N. and prascodymium, and prascodymium, and prascodymium, and prascodymium, and prascodymium.

bounds. She was use caned Addas-teia, 'she whom none can escape,' Nemesius (fl. c. 390 A.D.), a Chris-tian philosopher, was Bishop of Emesa in Syria. Very little is known about the facts and dates of his life.

Nemophila, Nemophila, a genus of hardy annuals (order Hydrophyllaeeæ) with in his Nemean Odes. According to annuals (order Hydrophyllaceæ) with Greek mythology, Hercules slew the blue or white flowers and pinnatifid Nemean lion here. The yalley con- leaves. N. insignis is a brilliant blue leaves. N. insignis is a brilliant blue

Nemours, a tn. in the dept. of Seine-

Nemours, a tn. in the dept. of Seineet-Marne, France, 10 m. S. of Fontainebleau. Pop. 5000.

Nemours, Louis Charles Philippe
Raphael d'Orléans, Duc de (1814-96),
seeond son of King Louis Philippe.
The title of Duc de N. was first horno
by the Armagnae family, and was
revived in Louis Philippe. Ho was
also offered the throne of Greece
(1825) and of Relgium (1831) but (1825) and of Belgium (1831), but refused both lonours. He fought in the Algerian expedition (1836-41), and after the revolution of 1848 lived in England till 1870. Sec R. Bazin's Le Duc de Nemours, 1907.

Nemuro, a port of Yezo, Japan, 265 m. E.N.E. of Hakodate. It has been an open port since 1910. There is excellent fishing. Pop. 12,500.

Nen, or Nene, a riv. rising in the W.

of Northamptonshire, England, and flowing past Northampton and Peterborough into the Wash. Length 90 m.

borough into the Wash. Length 90 m. Nenagh, a market tn. of co. The perary, Ireland, 11 m. E.N.E. of Killaloe. It has slato quarries and the remains of a Norman keep, called Nonagh Round. Pop. 4709.

Nennius, the reputed author of an ancient history of the Britons entitled Historia Britonum; is said to have been abbot of Banger at the beginning of the 7th century. The book, which is ascribed to him, companies with a fabulous agrount of menees with a fabulous account of the colonisation of the Island. Carinus and Numerianus. He wrote the colonisation of the Island. Its chronologieal blunders and the many Cynegetica; on fishing, Halientica; and on aquaties, Nautica. See Bahrens, Poetæ Latini Minores (vol. Nemesis (Gk. Nemesis, distribution, retribution), in ancient Greek in the goddess of vengeance and chastisement. Sho personites the indignation felt at all disturba proportion, punishes arrogan

eomponents, N. and prascodymlum, In 1885. The former gives rise to pink salts and the latter to green.

Neolithio, see STONE AGE.

the three gases N., krypton, and The quantity of these is very xeon. minute. Ramsay considers that all four 'companions of argon' do not exceed $\frac{1}{100}$ of the volume of argon in air. It has been supposed that N. is produced from radium emanation, hut the experiments lack conclusiveness. N. is extremely easy to detect spectroscopically, owing to its hrilliant red spectrum. It has been observed in 1/3 of a cuhic centimetre of air. As the gas only exists as one part in 100,000 of air, this means that of a cubic millimetre of N. has been detected spectroscopically.

Neophyte (Lat. neophytos, from Gk. ι εόφυτος, newly planted), a given by the primitive church to the new Christians, that is, to the pagans who had newly embraced Christianity and had been baptised. The term is still used by Roman Catholic missionaries to denote a convert from heathenism. In general language, newly entered upon, e.g. Ben Jonson's

neophyte player.'

Neoplatonists, the name given to an illustrious succession of ancient philosophers who claimed to found their doctrines and speculations on those of Plato. The speculations of the older philosophers were felt to be un-satisfactory. When men began to review the long succession of contradictory or divergent systems that had prevailed sinco the time of Thales the Milesian, in the grey dawn of Greek history, a suspicion appears to have sprung up that reality, certainty, truth was either not attainable or could only he attained by selecting something from every system. More-over, the immensely extended inter-course of nations, itself a result of Roman conquest, had brought into the closest proximity a crowd of conflicting opinions, beliefs, and practices, which could not help occasionally undergoing a confused amalgamation, and in this way presented to view a practical eclecticism, less refined and philosophical indeed than the speculative systems of the day, but not essentially different from them. This tendency to amalgamation showed itself most prominently in Alexandria, and here originated that philosophy promulgated by the N. which combines the peculiar mental characteristics of the East and the West. Yet it soon ceased to have any local connection with the city. Its most illustrious representatives were neither natives of Alexandria nor memhers of the famous Museum, and tbey had their schools elsewhere-in

Helium was first separated, and then | differ as to how much should be included under that term. By some it is used to designate the whole new intellectual movement proceeding from Alexandria, comprising, in this hroad view, the philosoppy, first, of Philo-Judæus and of Numenius the second, of the Christian Fathers (Clemens Alexandrinus, Origen, etc.); third, of the Gnostics; and fourth, of Ammonius Saceas and his successors. Others, again, would exclude the second of these (though the Alexandrian divines frequently Platonise), while a third party is disposed to restrict the application of the term to the fourtb. The last of these modes of regarding Neoplatonism is the one most current. A fresh stream of life was first poured into the old channels of Platonic speculation by Ammonius Saceas and Plotinus, and it is this fact which gives the school which they established its best claim to the evelusive title of Neoplatonist. The exclusive title of Neoplatonist. essence of all the Alexandrian speculations consists in the blending of Platonic ideas with Oriental mysticism; the peculiarity of the N., strictly so called, lies simply in the novelty. audacity, and ingenuity of their reasonings. They aimed at constructing a religion on a basis of dialectics. They strove to attain a knowledge of the Highest by assuming the exist-ence of a capacity in man for passing hoyond the limits of his personality, and acquiring an intuitive knowledge of the absolute, the true—that which is beyond and above the fluctuations and dubieties of 'opinion.' This impersonal faculty is called Ecstasy. Plotinus, in fact, set out from the belief that 'philosophy' (i.e. 'Absolute Truth') is only possible through the identity of the thinker, or rather of the subjective thought, with the thing thought of, or the objective thought. The god of Plotinus and the other Alexandrians is a mystical Trinity. The Divine Nature contains within it three Hypostases (Snbstances); its basis, if we may so speak, is called Unity, also poetically Primitive Light. From Unity, as the Unity,' of all things, primordial source emanates 'Pure Intelligence '(Nous); its reflection and image, that by which it is intuitively apprehended; from Pure Intelligence, in turn, emanates the 'Soul of the World' (Psyche ton pantos), whose creative activity produces the souls of men and animals and 'Nature'; and finally, from Nature proceeds finally, from Nature proceeds Matter, which, however, is subjected by Plotinus to such refinement of definition that it loses all its gross-Rome, in Athens, and in Asia. It is ness. Unity, Pure Intelligence, and not easy to say with whom Noo-the World-Soul thus constitute the platonism commenced. Scholars Plotinian Triad. Other Neoplatonie

philosophers were Porphyrius, Iam-blichus, Ædesius, and Proclus, Neoptolemus, in ancient Greek Nepenthes, ag legend, the son of Achilles and the order Nepe Deidamia; he is also called Pyrrhus.

At the death of his father he was taken by Ulysses to Troy, and he was

Troy in the wooden horse. At the fall of Troy he siew the aged Priam. Neosho: I. Co. seat of Newton co., Missouri, U.S.A., in the contre of a zino and lead-mining district. It has a government fish hatchery and many manufs. Pop. (1910) 6421. 2. A riv., rising in Morris co., Kansas, U.S.A., and flowing through Indian territory into the Arkansas R., near Fort Gibson. Length 400 m.. Neottia, Nidus-Avis, see Orchyds. Neozoic. a term introduced by

Neothal, higher Avis, see Orchids.
Neozoic, a term introduced by Edward Forbes to include all the strata from the Trias to the most recent deposits. They are generally divided into the two great groups of Secondary and Tertlary rocks. This division is, however, quite arbitrary. Nepa, a genus of hemipterous insects of the family Hydrocorism.

See WATER-BUGS.

Nepaul, an independent native state of India, comprises a portion of the southern slope of the Himalayas; all Is bounded on the N. by Tibet, on the It S. and W. by British India, and on the E. by Sikkim, a protected state. ha The state is separated from the plains gri iand, resembling an English down, in small, transparent erystals occurbut unhealthy, called the Teral, in small, transparent erystals occurbing action of this, and runger border. North of this, and runger border. North of this, and runger border of N., from 8 to 10 m. broad, presence of other minerals. When of abounding in wiid animals. North of a good colour, examples of cheolite this strip is a tract of hilly country, are out as gems.

Nephelium, see Litten and Local Methods of the minerals. include

est (29,002 ft.), and e principal Rapti, the tributaries. mate, most icalthy and iouutainous

districts, suggesting that of Southern Europe. The soil is extremely rich and fruitful. Bariey, millet, rice, maize, whent, eotton, tobacco, sugarcane, pine-apple, and various tropical fruits are cuitivated. Gold, silver, lead, iron, and copper mines are worked. The inhabitants consist

Pop. (estimated)

Nepenthes, a genus-the only one of the order Nepenthacea-of remarkable shrnbby plants with small green or brown flowers, borne in long racemes, and with lcaves dilated at one of the Greek heroes who entered the ends into pitcher-shaped ap-Troy in the wooden horse. At the pendages with a lid-like lamina. The broad strap-shaped portion of tho plant, which resembles a leaf blade, is the wing petiole or leaf stalk. size of the pitcher varies from that of a thimble to about 20 in. in length, with a capacity of about two quarts. The pitchers act as traps for insects and larger the bright

by a hone entrance, Their function is to provide nitrogenous food for the plant. About thirty species are known, mostly natives of tropleal Asia and the Malay Is. The culture of Ns. is easy if abundance of moisture and a tropical temperaturo can be provided. The pitchers must be kept partly full of water. The roots should be set in well-drained baskets containing pent fibre and sphagnum.

Nepheline, a rock-forming mineral consisting of sodium, potassium, and aluminium silicate, Na.K.Al.Sl.On. It crystallises in the hexagonal system; the crystals are transparent, have a hardness of 51, and a specific gravity of 26. Two varieties of the inlneralare found: 'glassy nephellne.'

Nophrite, also known as Jado or Axestone, is a hard miucral (hardness 7, and 8p. gr. 3), and occurs massive, compact, very tough, and without any cleavage. In colour it varies from white the state of white to bluish-green, and may be blotched or velued. It is sometimes translucent, and is greasy to the touch. In composition It is a silicate of magnesia and lime, although some alumina and oxido of iron are often The composition is very present. varlable, regard it as a massive form of tremelite. It is found in granite, guels. greenstone, etc. It was confused with jadelte until Damour (1863) showed that jadelte was silicate of alumina and lithla, which is fusible, whereas N. is infusible. N. takes a beautiful polish, and is highly prized for ornaments. worked. The impaintants consists that jadelte was silicate of ainmina of Tartar origin, such as Magars, of Gurangs, Newars, and Bhutias, The Cap, is Khatmandu (q.r.). The state is administered by the maharajah and his prime mulater, and there is a varieties. The Turks made it into British resident at the capital. Area handles for sabres. Many imaginary. (Gk. nephros, kidney) complaints; hence its name. The principal sources of the mineral at the present day are

New Zealand, China, N.W. America, Corsica, and Egypt. Nephritis, inflammation of dneys. There are many forms of dneys, a wide kidnevs. kidney inflammation, due to a wide variety of causes. In most cases poisonons substances are brought to the kidney by the blood stream, so that kidney disease is a frequent complication of such diseases as gout, typhoid and scarlet fevers, tuber-In chronic interstitial culosis. etc. nephritis, or granular kidney, the muscular coat undergoes fibroid and hypertrophic changes, and becomes uneven in surface. There is a marked increase of connective tissue about the tubules and glomerules. symptoms, as of nephritls generally, are anemia, weakness, digestive dis-turbances, and bloody urine. Acute Acute Bright's disease is characterised by enlarged and congested kidneys.

and casts in the urine. Nephrodium, a large genns of hardy greenbouse and stovebouse ferns of wide geographical distribution, characterised chiefly by the kidney-shaped indusium or spore cover. Many species and varieties are cultivated, and may be easily raised from spores.

Many tubules contain casts, and these are thrown off in the urine, giving a characteristic indication. The symptoms are fever, lumbar pains, dropsy with albumin, blood, epithelial cells,

Nephrolepis, or Ladder Fern, a small genus of ferns with long, narrow, leathery ferns. They are of great beauty and are easily grown in hanging baskets in the stovebonse where moisture is abundant.

Nepigon Lake, see Nipigon. Nepomuk, or Pomuk, John of, the patron saint of Bohemla, see John, St.

Nepos, Cornelius, the contemporary and friend of Cicero, Atticus, and Catulius. N. wrote historical works, and there is extant under bis name a work entitled Vitæ Excellentium Imperatorum. But in all MSS, this work is ascribed to Æmilius Probus with

written by N.

Nepos, Flavius Julius (d. 480), the backwards like those of Uranus last but one of the emperors of the Neptune, a British hattlesh West, born in Dalmatia. Ho was the 19,900 tons' displacement, speed nephew of Marcellinus and the son-labout 21 knots. She was built at in-law of Leo I., Emperor of the Portsmouth; launched, 1909 com-East, who proclaimed N. Emperor pleted, 1911.

virtues have been ascribed to it. of the West in 474. He crusbed bis Thus people once wore it as a charm rival, Glycerius, and made peace with against epileptic fits and nephrltic the Visigoths by ceding to them the Gallic province of Auvergne. He was driven out of Italy by Orestes, but re-tained his power in Dalmatia until his murder in 480 at Salona.

Neptune

Neposcope, an instrument adapted for the observation of the direction of the motion of a cloud and its velocity. There are many varieties of such instruments; the simplest form consists of a circular mirror with a graduated rim in which the reflection of a point of cloud is seen. The reflection is made to coincide with that of a small knob above the mirror, and the motion of the knob gives data from which the motion of the cloud relative to the mirror can be determined. A similar observation taken by another observer some distance away enables the true direction and velocity of a cloud to be determined. In the hands of meteorological experts these instruments provide information of value in the investigation of acrial phenomena.

Neptune, see Poseidon. Neptune. The discovery of N., the outermost planet of our solar system, is the most triumplant record of mathematical astronomy. Adams of Cambridge (1845) and Leverrier of Paris (1846) both determined its position from no other data than certain perturbations of Uranns, Galle, instructed by Leverrier, found the planet, Sept. 23, 1846, within half an hour. Its magnitude lies between 8 and 9, and it is invisible to the naked eye, though visible through a good opera glass as a greenish disc; apparent diameter, 2.6, real diameter, 35,000 m, but uncertain; volume, eighty-five times that of the earth, its mass seventeen times; density, 0.2. The distance does not follow Bode's law, being 2,800,000,000 m from the sun; the orbit has an eccentricity of 009, the least with the exception of Venus, making a difference of solar distance of 50,000,000 m. Inclination of orbit, 11°; revolution completed in 164 years at a velocity of about 3 m. per sec.; rotation not yet determined. The spectrum, the light being feeble, is difficult to deis ascribed to Æmilius Probus with the exception of the lives of Atticus termine, and indicates the presence of and of Cato the censor, which are a dense atmosphere similar to Uranus; attributed to N. It is probable that the blographies as they now that the blographies as they now exist, are epitomes of lives actually period, 5 days 21 hrs. 2.7 mins.; orbital inclination, 34° 53′, moving bally are desired.

Neptune, a British hattleship of

Nerchinsk, or Nertchinsk, a tn. in meansbaikalia, E. the Siberia, on the Nercha R., 135 m. E. of Chita. Pop. 7000.

Nerchinski Zavod, a tn. in the

Nerohinski Zavod, a tn. in the prov. of Transbaikalia, E. Siberia, 184 m. S.E. of Nerchinsk. It has a metcorological observatory and is the centro of a gold-mining district. Pop. (with convicts) 67,000.

Nereids in Grack method.

Pop. (with convicts) 67,000.

Nereids, in Greek mythology, the nymphs of the sca, the daughters of Nereus and Doris. The most famous of them were Amphitrite, the wife of Poscidon; Thetis, the mother of Achilles, and Gelatia. See Nymph.

Nereis, a genus of Polycheta or marine cheetopod worms, with long slender bodies and a flat four-eyed head. W relegite compressive town.

N. pelagica, commonly found on the coast under stones, is about 6 in. long and brilllantly iridescent.

Nercus, in Greck mythology, a god of the sen, the son of Pontus and Gea. He married the Oceanide, Doris, by whom he became father of the Nereids. He had the gift of prophecy and the power to change his form at will. Ho is generally represented as a calm and gentle old man bearing a trident.

Nergal, the Assyrlan god of hunting, was also identified according to the Assyrian tradition with the planet Mars. This god was represented in sculpture as a winged lion with a

human head.
Neri, Philip de (1515-95), a saint of Nert, Philip de (1515-95), a saint of the Roman Catholio Church, born in Domitius Alenobarbus aud of Agrip-Florence. In 1550, in unison with several of his friends, he established a confraternity for the care of poor pilgrims visiting Rome, as well as of the adopted him (50 A.D.), and his name, arbus,

gio, both afterwards cardinals, Sab-rlati, and some others. The male object of this association was the moral instruction and religious train lng of the young and ineducated. Sacred musical entertalnments (thenco called by the name of oratorio) were held in the oratory. Ho was canonised by Gregory XV, in 1622. Nori, Pompeo (1707-76), nn Italian

Nerine, a genus of bulbous plants (order Amaryllidacem) with clusters of star shaped, brightly coloured flowers borne on tall, elegant stems. The best-known species is N. sarniensis (the Guernsey lily), a nativo of S. Africa, which in autumn bears rosepink flowers, but has numerous varietles. N. fothergilli bears glistening scarlet flowers on a rigidly creet stem. Ns. flower in the open in warm localities, but are usually grown in the greeuhouse, requiring only protection from frosts and when in full growth liberal watering.

Neris-les-Bains, see Montlucon. Nerium, a genus of evergreen flowering shrubs (Apooynacee), bearing richly-coloured cymes of funnelshaped flowers. The species cultivated aro N. Oleander (the oleander) and N. odoratum, both of which have numerous florists' varieties. can be trented either as greenhouse or as half-hardy shrubs.

or as nair-hardy shrubs.

Nerja, a com, of Spain in the prov.

of Malaga, on the Mediterranean,

26 m. E. of Malaga. Pop. 7000.

Nernst, Walther (b. 1864), a German chemist, born at Briesen in W.

Prussia. He is director of the University Institute for Physical Chemistry at Berlin. His chief publication, Theoretische Chemie, has been translated into English II o invented the Nerust electric lamp.

Nero (37-68 A.D.), a Roman emperor, born at Antlum, the son of Cn.

Ľ

Cæsar a was the germ of the more celebrated Guards, at the lustigation of Afranius Congregation of the Oratory, which was founded by St. Philip in concert emperor, instead of Claudius's son with his friends Baronius and Tarugio, both afterwards cardinals, Sabgood promise, under the guldanee of Burrhus and his tutor Sencea the philosopher; but the baleful influenco of his mother, together with his own moral weakness and sensuality, frustrated their efforts, and he soon plunged headlong into debanchery, extravagance, and tyranny. He caused Britannieus, the son of Clau-Neri, Pompeo (1707-76), an Italian jurist and political economist. He was professor of public law in Pisa, and moved to Florence in 1758, becoming counsellor of the regency during Leopold's minority. N. please his inistress, Poppeas Sabinatthe, to founded the Tuscan Academy of Botany, and wrote on currency, etc. See Ridolff, Elogic dit P. Neri, 1817, to marry whom he also divorced and Nouv. Biog. Univ., 1852-66; Rose, Biog. Diet., 1818. dus, to be treacherously poisoned in the age of fourteen, and afterwards (50 A.D.) caused his own mother, Agripping, to be assassinated, to please his mistress, Poppea Sabina (the wife of his principal boon-companion,

may be estimated from the fact that it actually issued an address conit actually issued an address con-gratulating the hateful matricle on the death of Agrippina. The affairs of the empire were at this time far from tranquil. In 61 A.D. an insur-rection broke out in Britain under Queen Boadicea, which was, however, suppressed by Suctonius Paulinus. At home matters were not much better. The emperor was lampooned in verse; the senate and priesthood, alike venal, were also satirised by audacious malcontents; Burrhus, a valualle friend, dicd; and even Seneca, though not a great moralist, out of his books, thought it only decent to remove from court. In July 64 occurred a great conflagration in Rome, by which two-thirds of the N. himcity was reduced to ashes. self is usually believed to have been the incendiary. It is said that he admired the spectacle from a distance, reciting verses about the burning of Troy, but many scholars are doubtful whether ho really had any hand in it. At all ovents, he laid the blame on the Christians, and persecuted them with great fury. He rehuilt the city with great magnificence, and reared for himself on the Palatine Hill a splendid palace, called, from the immense profusion of its golden ornaments, the Aurea Domus, or Golden House; and in order to provide for this expenditure, and for the gratification of the Roman populace by spectacles and Homan populace by spectacles and distributions of corn, Italy and the provinces were unsparingly plundered. A conspiracy against him failed in the year 65, and Seneca and the poet Lucan fell victims to his vengeance. In a fit of passion he murdered his wife Poppæa by kicking her when the way regresser. He there when she was pregnant. He then proposed to Antonia, the daughter of Claudius, but was refused, whereupon he caused the too fastidious lady to be put to death, and married Statilia Messallina, after killing her husband. His vanity led him to seek distinction as a poet, a philosopher, an actor, a musician, and a charioteer, and he received sycophantic applauses, not received sycopiantic appliauses, not only in Italy, but in Greee, to which, upon invitation of the Greek cities, he made a visit in 67. But in 68, the Gallic and Spanish legions, and after them the Prætorian Guards, rose against him to make Galba emperor, and N. fled from Rome to the house of a freedman, Phaon, about four miles distant. The senate, which had hitherto been most subservient, declared him an enemy of his country, and the tyrant ended his life hy suicide on June 11, 68.

The low servility into which the general who was consul in 207 B.C. Roman senate had sunk at this time Inthat year heintercepted Hasdrubal, who was crossing from Spain to Italy with reinforcements for Hannibal, and severely defeated him at tho hattle of the Metaurus. Over 50,000 Carthaginians perished, and amongst them Hasdrubal himself. N. was censor several years later.

Nervous

Nero, Tiberius Claudius, a Roman soldier, served as quæstor under Cæsar in 47 B.C., and was on the side of Brutus after the latter's death, but was later reconciled to Octavius. Ho is principally known as the hus-hand of Livia Drusilla, and father of her two sons Drusus and Tiberius. the latter of whom became emperor. In 38 Octavius divorced his wife, Scribonia, and married Livia, who had obtained a divorce from N.

Neroli, Oil of, see ORANGE. Nertchinsk, see NERCHINSK.

Neruda, Madame, see Hallé, Lady. Nerva, Marcus Cocceius (32-98 A.D.) Roman emperor for scarcely two years. He had previously served the Roman state as prætor, then as consul. He was appointed emperor upon the death of Domitian, but his honours sat heavily on him, and he gladly reigned jointly with Trajan until his death.

Nerval, Gérard de (1808-55), the adopted name of Gérard Labrunie, a Fronch man of letters. In 1828 hc published a translation of Goethe's Faust, and later on he collaborated with Théophlle Gautier. He was a great traveller, and narrated his adventures in the Révue des Deux Mondes. His most interesting literary contribution is his Aurélie, on le Rève et la Vie. He wrote many charm-ing short stories, which reveal an attractive personality, and which flow

in a spontaneous graceful manner. Nervi, a tn. and seaside resort in the prov. of Genoa, Italy, 6 m. S.E. of Genoa. Pop. 7000.

Nervous System, that part of the mechanism of the body whose special function is the co-ordination or control of the activities of the organs. The system is composed of nervecells or neurons, which are linked together and capable of sending impulses from one to the other. In other words, the nerve-eell has a life or metabolic existence of its own, which is modified in a particular manner by certain stimuli received from outside itself, and which modifies the meta-bolism of an adjacent nerve-cell or certain other cells, such as those of In this way impulses are muscle. conveyed from the exterior to centres within the hody, and from such centres to other centres or to other tissues. The effects of what may be icide on June 11, 68.

Nero, Gnaius Claudius, a Roman called nerve-currents are divisible

which involve movements in certain process is known as the axis-culinder structures, as the contraction of a muscle; those changes which involve modifications in consciousness, as a special or general sensation; and those changes which are merely chemical, that is, which stimulate the production of certain substances, as in the various secretory organs. The different nerves are responsive to different stimuli, and each nerve transmits its impulse in one direction only. The latter property has given rise to the distinction between efferent and afferent nerves: those that conduct impulses outwards from a nervous centre, and those that conduct impulses towards the centre. The chief kinds of efferent nerves arc: (1) Motor nerves, which go to voluntary or involuntary muscles and cause them to contract; (2) Accelerator nerves, which produce an increase in the rate of rhythmical action, such as those which make the heart beat at a greater speed; (3) Inhibitory nerves, those which retard the rate of rhythmical motion, er stop it altogether; and (4) Secretory nerves, those which cause secretion to flow out from the various glands. The chilef kinds of afferent nerves are: (1) Those which conduct impulses to the central system and there give rise to impulses to he carried away by efforent nerves, as in reflex action; (2) those which convey impulses giving rise to the special sensations of sight, hear-ing, etc.; (3) those which convey general or non-localised sensations; and (4) those which give rise to the experience of pain. The N. S. Is also to be classified according to the anatomical disposition of the nerves and nervous organs. The most con-venient classification involves three divisions: the central N. S., the perlpheral N. S., and the sympathetic nerves. These divisions are somewhat arbitrary, but they are sanctioned by metals and sympathetic and sympathetic arbitrary. tloned by custom and convenience. The central N. S. consists of the The central N. S. consists of the brain and spinal cord. The peripheral system consists of the cramal nerves, the spinal nerves, the sense organs, as the eye, car, etc., and the motor end-plates. The sympathetic system consists of the ganglia situated on either side of the spinal column, with their cornections. with their councetions. Before describing these systems in detail, the properties of nerve-substance in general must, bo discussed.

Nervous tissue is of three kinds; nerve-cells, nerve-fibres, and nenroglia, or connecting tissue. Nerve-The form of cell which makes up the superior oblique muscle of the eyebrain and spinal cord consists of a (5) The Trigeninal nerve is mainly protoplasmic nucleated body, from sensory. It divides into three main

into three classes: those changes which arise certain processes. process or axon, and the others are collectively called the dendrites. The axon possesses a uniform diameter and throws off collateral branches without diminishing in section; the dendrites divide into numerous branches, which taper off as they pass from the cell-body. The axon appears to be the structure by which communication is made between cell and cell, and it is an essential part, not only of a nerve-cell, but of anervefibre. In some fibres the thread-like axon becomes sheathed with a substance called myclin; it is then called a medullated fibre: if the sheath is th · lcmma, a If the pl: of the br nerve-· ille the ce. wl cord is m vithout . e-fibres a. 1mnarts of the bedy are bound up in bundles which we call nerves.

-Thecentral consists of th. th of which are elsewhere described. The of which are elsewhere described. The most important part of the brain is the cortex, which is made up of grey matter. There are subsidiary masses of grey matter in the interior of the brain, in the cerebellum, and in the spinal cord. It is in this grey matter that voluntary action arises, and to it are also give rise

masses o' with involuntary and reflex actions. while the white matter may be looked upon as a communicating medium

only. Cranial nerves .- These nerves are concerned mainly with the supply of tho head. There are twelve pairs of them, and they are spoken of by their numbers as well as their names: (1) The Olfactory nerve is purely sensory; It comes from the nose and proceeds to the cerebrum: It is the nerve of smell. (2) The Optic nerve is purely sensory; it enters the cychall at the rear and connects with the cerebrum by way of subsidiary masses of grey matter called the corpora quadrigr-mina, and corpora geniculata. (3) The Oculomotor nerve is purely muscular, and supplies most of the muscles of the eye. (4) The Trachlear nerve is muscular, and supplies the

region. It has a smaller motor branch for the muscles of mastication. The Abducent nerve is muscular and supplies the external rectus muscle of the eye. (7) The Facial nerve is a motor nerve, supplying the facial muscles. Injury to this nerve causes the loss of all power of facial movement and expression. (8) The Auditory nerve is divided into two parts: the cochlear nerve, which is the nerve of hearing, and the vesti nerve, which conncots with the

circular canals and conveys impulses which onable the hody to he kept in equilibrium. (9) The Glosso-pharyngeal nerve is mixed sensory and motor. Certain muscles of the pharvnx are impelled to action hy it. while other fibres are concerned in the sense of tastc. (10) The Vagus or Pneumogastric nervo has varied functions; it contains fibres which convey tions; it contains fibres which convey motor impulses to the stomach and intestines, afferent impulses from the lungs, etc. (11) The Spinal Accessory nerve contains motor fibres for the larynx and some inhibitory fibres for the heart; it also supplies a few muscles in the neck and hack. (12) The Hypoglossal nerve is the motor

nerve for the tongue muscles.

The Spinal nerves arise from the spinal cord and run out through holes between the vertohree to supply tho trunk and limbs, though some of the upper ones are concerned with the head and face. The division into spinal and cranial nerves is arhitrary The division into and not real. There are thirty-one pairs of epinal nerves, whose names depend on the part of the spinal column from which they pass. Thus there are eight cervical, twelve dorsal, or thoracic, five lumbar, five sacral, and one coccygeal. Each spinal nerve is a mixed nerve, containing both motor and sensory fibres. As they cmerge from the spinal cord, the motor and sensory bundles are separated. The sensory fibres come from the back of the spinal cord; their point of emergence is called the posterior root, and a spinal ganglion is situated at that point, consisting of a collection of nerve-cells which have two axis-cylinders proceeding from two axis-cylinders proceeding from them, hy which the cells communi-cate in one direction with the skin, and in the other with the spinal cord or hrain. Tho motor fibres sprout from the grey matter of the spinal cord, and proceed by way of the anterior roots to the mixed nerves, and themes to their destination in and thence to their destination in the end-plates of the voluntary

branches for the upper, middle, and ganglia running down on each side of lower portion of the head and face the vertebral column called the sympathetic chain. These ganglia consist of nerve-cells, and the fibres from the on herve-cells, and the fines from the anterior roots hanch round these cells and stimulate them to send out impulses by their own axis-cylinder processes to the involuntary muscles. The medullated fibres which carry the impulses from the spinal cord to the ganglia are termed pre-ganglionic; those which start from the ganglia are called postwhich affect

> must not he the ganglia. The ganglia serve as re-distributing stations, where an impulse received from one afferent fibre may be communicated to a number of cells in the ganglion which convey hy their own axis-cylinders the impulses to the various involuntary muscles. Among

> muscles served are those which effect the peristaltic movements of the alimentary tract, those which constrict

> the arteries and regulate the circula-tion, including the mascles of the heart to some degree, the unstriped muscles of the lungs and windpipe, those which control the size of the pupil of the eye-hall, those connected with the sweat glands of the skin. etc.

Diseases of the nervous system.— These may affect the system as a whole, or he localised. Neurasthenia (q.v.) is a general weakness of the nerves; neuralgia (q.v.) is often caused hy pressure from neighbouring infigured tissne; neuritis (q.v.) is in-flammation of a bundle of nerve-fibres, either localised or multiplo, Any change in the blood supply is liable to lead to modification of the nerve substance; hence the effects of alcohol and the toxins of micro-organisms. Excessive stimulation of the nerves is likely to lead to general lack of tone, while the effect of injury or of neighbouring growths may involve disturbance of function in the nervous system. Degeneration of the neurones is apt to he affected by heredity, and leads to widespread or localised hreaking down of function, and consequent atrophy of the part affected. In locomotor ataxy the afferent nerves are particularly af-fected. This leads to unco-ordinated state of the muscular and N. S.: the patient cannot stand without falling and the reflexes are absent. Progressive muscular atrophy is associated with nerves of sane is

the end-plates of the voluntary the cortex (see Insanity).

museles.

Sympathetic system.—Some of the anterior root fibres pass to a chain of He led the Gothic revival, and his

is a text-book on the subject. Ho designed Kimmel Park, Cloverly Hall Loughton Hall, and Westcombe Park.

Ness (Eng. nose, A.-S. næse, Ger. nase, Icelandio nes, Lat. nasus, Fr. nez), a geographical termination, signifying promontory. Names in -ness abound among the Orkney and Shetland Islands, and on the coast of Caithness; and along the E. coast of Great Britain as far as Dungeness in As the corresponding ter-Kent. mination -næs prevails in Scandinavia, the existence of names in -ness Scandinavinn colonisation.

Ness, Loch, a long narrow lake in Inverness-shire, Scotland, extends N.E. and S.W., and is 23 m. in length, and 1½ m. in average breadth. It receives the Morriston, the Oich, the Foyers, and other streams, and its surplus water is carried off to the Moray Firth by the R. Ness. In many places it is 130 fathoms in

depth.

Nesselrode, Karl Robert Count (1780-1862), a Russian statesman, born at Lisbon, of German descent. He took an activo part in the negotlations for the peace of Tilsit in the Napoleonie campulgu, and acted as places chosen or constructed by birds intermediary between Alexander I. or any other animal for incubation, and Talleyrand, always maintni

and Taneyrand, aways manth
a policy of moderation. At one
he was attached to the Russian
bassy in Paris. Ho took part in
Congress of Vienna. After signing the
pence of Paris (1856) he resigned.

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Nessus, see HERCULES.

Nestor, in Greek legend, was the son of Nelens, King of Pylos, the husband of Eurydice, and father of Perseus. When his father's kingdom was invaded by Hercules, he alone of his brothers was spared. Ho fought against the Arcadians, Eleans, and Centaurs, and took part in the siege of Troy. In his old age he was re-

nowned for his wisdom.

Nestorius (d. c. 450 A.D.), a native of Germanicia, a city of Northern Syria, in the putriarcinte of Antioch, was probably n disciple of the celebrated Theodore of Mopsuestia; and having received priest's orders at Antloch, he was selected by the emperor, in 428 A.D., as patriarch of Constantinople. Soon after his consecration, a controversy arose as to the divine and human natures of our One of the priests who fol-Lord. lowed N. to Constantinople, Amstasius, having in a sermon, which was by some ascribed to N. himself, denied that the Virgin Mary could be truly through them. The colution of such called the 'Mother of God,' being only in truth the mother of the man Christ,' N. warmly defended Ams. of site is plainly due to the instinct tasins, cspoused this view, and of concealment. Some fish and some

book, Sketches from France and Italy, elaborated it into the theory which has since been known by his name, and which equivalently, if not in formal terms, exaggerated the distinction of two natures in our Lord into a distinction of two persons—the human person of Christ and the Divine Person of the Word. An animated controversy ensued, which drew from Cyril, patriarch of Alexandria, a formal condemnation of the doctrine of N. in twelve annthemas still preserved, and n similar condemnation, accompanied by a thrent of deposition and excommunication, in Britain is held as an evidence of from Celestine, Bishop of Rome. N. remaining firm in his opinions, a general council was convened at Ephesus in 431, at which Cyril took the most active and provulnent part, and at which, notwithstanding the absence of the patriarch of Antioch and his bishops, N. was condemned and deposed. Considerable opposition was offered to this, but ultimately N. was confined in n monastery near Constantinople, whence, nfter four years, he was banished to the Greater Oasis in Upper Egypt, and after several changes of hils place of con-

inement, died in exile.

Nests, in natural history, are the places chosen or constructed by birds

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concealment and protection, birds that are content with slight depressions in the ground, such as terns and plovers, lay eggs which so

that they A decided N. is the burrow, such as that occupied by the sand marlin, kingfisher, or putlin. In many cases these underground N. are made in burrows left by rabbits or voics. Many birds and some animals make their N. in the hollows of trees; the female of the Bornenn rbluoceros hornbill is sented up by the male for many weeks, and thus nbsolutely protected. The mud N. of the swallow family and other birds are wonderful examples of industry. Some of these weigh as much as eight or nine pounds. Among the crudest that are made with collected material, such as sticks, leaves, blades of grass, or hair, are those of the wood pigeon, which are so loosely put together that the eggs are visible through them. The evolution of such

great nest-building craft.

Nests, Edible, are produced by species of swifts, or swiftlets, in the Malay Is. and Australia. In most of the mud nest building birds saliva is secreted to mix with the mud. In these swiftlets the secretory glands are so developed that the use of mud and other matter is abandoned, the nest being almost or entirely of the bird's own secretion. These nests are in great demand by the Chinese for making birds'-nest soup. In the Malay Is. are largo remote caves where the swifts have built for many centuries, and they are leased to collectors for large sums of money, and millions of nests are annually imported into China. The nests are taken as soon as they are made, and while still white and pure, those that contain foreign matter or those that are old and

yellow not being of any edible value. Nestvizh, or Nesvigh, a tn. of Russia, in the gov. of Minsk, on a trib. of the Niemen. Pop. 8500.

Nets are fabries in which the threads cross each other at right angles, leaving a comparatively large open space between them; the threads are also knotted at the intersections. In this respect, netting differs essentially from weaving, where the intersecting threads simply cross each other. The open spaces in N. are called meshes, and these correspond in size with an instrument week. instrument used in net-making, consisting of a flat piece of wood or other hard substance, usually about the shape and size of a common paperknife. In addition to this, a peculiar kind of needle is used, upon which a largo quantity of the thread is placed, by winding it from end to end between the forked extremities. The art of net-making has been practised from the earliest times by the most savage as well as the most civilised nations. It is easy to see that the human race could not help learning the value of this art from seeing how frequently land and water animals get entangled in the shrubs and weeds through which they attempt to pass; We have ample illustrations of the uses of N. in the bas-reliefs of Assyria, Greece, and Rome, and in the mural paintings of Egypt. Until recently N. have been always made by hand. Hemp is the chief material for netmaking; and in order to prepare it, it is first passed in long rolls through a machine consisting of two rollers with blunt ridges, the upper of which is kept down on the material by means of a hanging weight, consisting of a loaded box suspended to a chain from

insects and spiders have developed quently passes through the carding. roving, and spinning processes, as in all other kinds of yarn, and is finally twisted into threads or twines of tho required thickness. After the N. comes from the loom, it goes to the finishers, who, by hand, make the addition of a kind of selvage, consisting of several thicknesses of twine, to givo strength to the edges. A great

givo strength to the edges. A great variety of N. are in use amongst fishermen, but the principal are the seine, trawl, and drift nets.

Netherlands, see Holland.

Nethersole, Sir Francis (1587-1659), secretary to the Electress Elizabeth, a native of Kent. He was secretary to the Laws Health of the secretary to the Laws Secretary to the Laws Health of the was secretary to the secretary to the secretary the secretary that was secretary to the secretary than the secretary that was secretary to the secretary than the to James Hay, afterwards Earl of Carlisle, in 1619, and accompanied him on his visit to the Elector Palatine. On his return he was knighted. and became secretary to the Electress Palatine. In 1623-24 he was M.P. for Corfe Castle, being again elected in 1625 and 1628, but in 1633 suffered imprisonment for his zealous support of the electress, and on his release took no more part in public life. He wrote political pamphiets, and his despatches as secretary to the elec-tress are summarised in Mrs. Green's Life of the Princess Elizabeth.

Nethou, see Pyrenees.
Netley, a vil. in Hampshire, 3 m.
S.E. of Southampton. There are ruins of a Cistercian Abbey (Early English and Decorated) dating back to the early 13th century. Netley Hospital was opened in 1863 for investigate a plateau. valided soldiers.

Netscher, Gaspar (1619-84), a German painter, born at Heidelberg. He took up painting as a profession and lived in the Hague under the patron. age of William III.

Nettle, a name given to a number of annual and perennial herbs, characterised by stinging hairs on leaves and stems. The Great N. (Urtica dioica) is a perennial with small green flowers in long, branched clusters. The tender tops are sometimes boiled and eaten as a vegetable in spring. Its fibre vicids a yarn, said to be superior to jute and hemp, though inferior to flax, and is valuable for damasks and brocades. A new process for extracting it has been introduced. The small N. (U. urens) is an annual, with flowers in a short, seldom branched eluster. U. pilulifera, a doubtful British native, found on the E. coast of England, is more virulent than the others.

Nettlerash, or Urticaria, a disease of the skin characterised by the development of raised red or white wheals similar to those produced by the axle of the roller. After the fibre the sting of a nettle, and accompanied has passed through this, it is much by a burning and itching sensation more supple than before. It subset which is aggravated by scratching. the sting of a nettle, and accompanied by a burning and itching sensation

The cause is some digestive disturbance, due to the ingestion of certain food, such as shell-fish, strawherries, cheese, etc. The best treatment is the administration of a purgative com-bined with an antacid, such as magnesia. The chronic form of the disease is not associated with any errors of dict, though it is worth while investi-gating whether the omission of an accustomed article of food is attended with any relief. Attacks occur periodically and the wheals persist for a longer time than in the acute form. Recurences sometimes take place over a period of two or three years. The treatment should include the external application of a lead ointment to soothe the Irritation, while antacids are recommended for internal administration.

Nettleship, Henry (1839-93), an English Latin scholar, born at Kottering. He holped Conington in his edition of Virgil, and eventually filled the eminent classicist's post as professor of Latin at Corpus (1878). Previously to this N. had been elected fellow of Amongst many valuable Lincoln. Lincoln. Amongst many valuable contributions to the classies he collaborated with Dr. Saudys in bringing out a new edition of Soyfiert's Dictionary of Classical Antiquities, and wrote an article called 'The present relation between Classical Research and Classical Education in England.'

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Nettleship, John Trivett (1841-1902), an English animal painter and author, born in Kettering, famous for his painting, 'The Puna devouring a Peacoek.' His best known books are Essays on R. Browning's Poetry and George Morland and the Evolution

from him of some Later Painters.
Nettuno, a seaport of Italy, 32 m.

S.E. of Rome. Pop. 5500.

S.E. of Rome, 1905, 5500.

Netzehkau, a tn. of Saxony, Germany, 12 m. W.S.W. of Zwiekau. It has iron foundries. Pop. 7565.

Neubrandenburg, a walled tn. of Germany, in the grand duely of Mecklenburg and Strelitz, 74 m. N. of Berlin. It contains four handsome Gathia grates of 4th courtery work. Gothic gates of 14th-century work-manship. The grand-ducal palace of Belvedero stands on a hill overlook-

ing Lake Tollense.

Neuburg a tn. of Bayarla, on the Danube, 45 m. N. by W. of Munleh.
Pop. 9056.

Neubydzow, a tn. of Austria, la the prov. of Bohemia, and 50 m. E.N.E. of Prague. 1'op. 7541. Neuchatel, or Neufehatel, known

also as Neuenburg: 1. A canton in the W. of Switzerland, between Lake of the Jacobite cause. His chief fame Neuchâtel and the Freach frontier, rests upon his assisting the Corsicans N. lies in the midst of the Jura Mts., against the Genoese, and ultimately

In the acute form they occur sud- four chains of which, running from dealy in large or small numbers and N.E. to S.W. traverse the canton, usually disappear after a few hours. The greater number of the numerons streams which water the canton flow into the Rhine. Among these monntain torrents the principal are the Reuse, the Seyon, and the Serriere.
The Lake of Neuehâtel is 25 m. long, and from 3 to 5½ m. wide. Its level above the sea is 1420 ft., and it has a depth of 400 or 500 ft. The natural products are iron ores, coal, asphalt, fruit, including grapes—from which good red and white wines are made timher and corn. The rearing of cattle constitutes an important branch of industry, and large quantities of exported; the checse are hut speciality of the canton is watchmaking. Area 312 sq. m. Pop. 132,184. N. joined the Swiss Confederation in 1815. 2. The chief tn. of the canton, occuples a magnificent site on the N.W. shore of the Lake of Nenchâtel, 25 m. N.W. of Bern, and Is noted for its many charitable institutions, and for the beauty of its charmingly situated environs. It is the sent of the watch-making industry Pop. 23,505.
Neudamm, a tn. of Brandenburg,

Prussia, 11 m. from Küstrin. The chief manufs. are cloth and hats.. Pop. 7826.

Noudek, a tn. of Bohemia, Austria, 10 m.N.N.W.of Karlsbad. Pop. 6896. Noudorf, tn. of Silesia, Prussla, 5 m. W.S.W. of Köalgshütte. Pop. 8167. Neudorf, sce IGLO.

Noue Frele Presse Die (The New Free Press) was founded in 1864 by Max Friedländerand Michael Etienne. It is the chief paper of the German Liberal party in the Austrian empire, and is published daily in Vienna. Neuendorf, a vil. in the Ithine Pro-vince, Prussia, and lies 2 m. distant

from Koblenz.

Neuern, a com, of Bohemla, Austria, 10 m. from Karlsbad. Pop. 16.733. Neulahrwasser Harbour, sec DANZIG.

Neugersdorf, see GERSDORF.

Neuhaldsleben, a tn. of Prussla in Saxony, on the Ohro, 15 m. N.W. of Magdeburg. Manufs, include terracotta wares, gloves, beer, and malt. Pop. 10,774.

Neuhaus, a tn. of Bohemla, Austria.

has a 13th-century castle. Pop. 10,119. Neuhausel, a th. of Neutra co. Hungary, 16 m. N. of Komorn. The Hungarian namo is Ersekulyar. Pop. 13,500.

Neuheiduk, a vll. of Sllesla, Prussla.

Pop. 6316.

Neuhoff, Theodor von (c. 1690-1756). a German adventurer. He entered the service of King Charles XII. of Sweden, and was an ardeat supporter ascending the throne as Theodor I., He was soon obliged to abdicate the throne, and was thrown on more than one occasion into prison for debt.

Neuhuys, Albert (b. 1844), a Dutch painter, born in Utrecht. His pictures are chiefly of genial home life, young mothers with children; his strength lies in his individuality. See Max Rooses, Dutch Painters of the 19th

Neuilly-Plaisance, a com. of Seine-et-Oise dept., France, about 20 m. from Pontoise. There are limestone quarries and manufs. of pottery. Pop.

6400.

Neuilly-sur-Seine, a suburb of Paris, between the fortlfications and the Seine. The castle of St. James, dating back to 1775, has been converted into a lunatic asylum and the Galignani

Institution. Pop. 42,000.
Neu-Isenburg, a tn. of Hesse, Germany, 13 m. distant from Darmstadt.
Pop. 11,437.

op. 11,437. Neukirch, Benjamin (1665-1729), a German poet, born in Silesia. His publications include a poetical translation of Fencion's Telemaque, some satires, and a book of Scleet Poems. His best productions are his satires and poetical epistles.

Neumarkt: 1. A tn. of Bavaria, 20 m. S.E. of Nuremberg. Pop. 6385. 2. A tn. of Galicia, Austria, 56 m. S.W. of Tarnov. Pop. 9185.

Neumecklenburg, an Island of the Bismarck Archipelago in the Pacific

Ocean. Area 4600 sq. m.
Neumünster, a tn. in the Prussian
prov. of Schleswig-Holstein, 50 m.
N. of Hamburg. Manufs. include cloth, cotton, carpets, leather, beer, and sweetmeats. It is an ancient city, and was originally called Widendorp.

Neunkirchen: I. A tn. of Rhenish Prussia, on the R. Blies, and 12 m. distant from Saarbrücken. Pop. 34,532. 2. A market tn. in Lower Austria, about 8 m. distant from Wiener - Neustadt. The principal trade is in woven goods and metals. Pop. 11,899.

Neuossegg, now Ossegg (q.v.).

Neupaka, a manufacturing tn. of Bohemia in Austria, and is 57 m.

E.N.E. of Prague. Pop. 6843. Neu-Pommern (originally

called New Britain), the largest island in the Bismarek Archipelago, in the Pacific Ocean, off the coast of Papua, and is separated from Neumeckichburg by St. George's Channel. It is of volcanic origin, and comprises an area of 9600 m. The Herbertshire Port overlooks Blanche Bay at the extreme N.E. of the island, and is the seat of adminiswas discovered by Dampier in 1699. The natives are Melanesians.

tween the Colorado and Limay Rs., with an area of 42,350 sq. m. The surface on the whole is mountainous, and the principal riveristhe Neuquen.

Cap. Chosmalal. Pop. 28,000.

Neuralgia (Gk. νεύρον, nervo; αλγος, pain), a pain along the course of a nerve not associated with any demonstrable change in structure. This definition is not always applicable, for the pain is often accom-panied by swelling, redness, etc.; but in the large majority of cases the cessation of the neuralgic pains leaves the patient as he was before the attack, with the exception of a degree of exhaustion. The pain is of a paroxysmalcharacter; itsonsetissudden, and its cessation no less so. It may even take on a periodic character, recurring at the same time of day for weeks, or recurring at fairly regular intervals of a few weeks. There is usually a fair degree of localisation; the patient feels the most intense pain at particular points, though it may often be felt diffused throughout the

area served by a nerve.

It is often difficult to assign a cause to a neuralgic attack. Generally speaking, hereditary influences, poor nutrition, fatigue, or worry are pre-

disposing causes. Persons of gonty or anomic tendencles are apt to suffer from N. Occasionally it follows periods of excitement or overwork, and is often associated with the abuse of drugs, as alcohol and tobacco. Ιt. a regular accompaniment malaria, and cold, damp conditions are favourable to its development. In some cases it can be seen to be due to the pressure of a tumour or of in-flamed matter in the course of a nerve, and some of the most obstinate varieties are attributed to the pressure of bony structure upon the nerve as it passes through a foramen. The

immediate cause of a paroxysm may be any sudden shock or jar, change of temperature, sudden movement, or any marked change in consolousness. such as the mere dread of a recurrence.

Neuralgic pains are usually classified according to their anatomical situation. Tie douloureux is a distressing variety affecting the tri-geminal or facial nerve. The paroxysm is unusually sudden, and is usually of short duration. The pain is felt at the side of the head, and is seldom experienced on both sides at once. The skin may become red and swollen, and tender points can be located where the pain is extra-ordinarily intense; these are situated where the nerves emerge from the deeper-lying tissues. Supraorbital N. affects the brow. The pain is less intense in character than that of tic Neuquen, a ter. of Argentina, be-douloureux, but tends to remain for

which symptoms of a hysterical nature are observed. Intercostal N. affects the nerves which emerge from the front of the spinal cord. difficulty of exactly localising it sometimes gives the impression that a pleuritic affection is the cause of the trouble. It is often associated with trouble. It is often associated with herpes coster, or shingles. Scialica is an obstinate form of N. affecting the great sciatic nerve; it is most distinctly felt in the neighbourbood of the joints, and is usually caused by exposure to wet or cold, or to the over-long maintenance of a fixed position of the lower limbs. position of the lower limbs.

The treatment of N. should aim at imin cause. elimin ' Good plenty n from of res Of drugs, worry are indispensable. worry are indispensable. Of drugs, morphia, antipyrin, phenacetin, and aspirin are most satisfactory. Lotions and plasters of belladonna, aconite, laudanum, and chloroform are recommended as soothing applications. Operative measures are seldom called for, but success in obstinate cases has been achieved by

to a group of symptoms arising from weakness or exhaustion of the nerve centres. The usual symptoms are want of energy, predisposition to fatigue and disinglination for bodily activity, loss of nemory, insomila, pain in the back, disturbance of directive functions, including constipation, and a sense of fulness after eating, disturbance of sexual functions. tions, involving amenorrhoa and dysmenorrhoea in women and impotence and spermatorrhoea in men, disturb- ing tissue, it is ance of the special senses, involving pseudo-neurona. head - noises, blurring of vision, regional analgesia, etc. N. may be regional analgesia, etc. N. may be classified according to the predominant symptom or group of symptoms. nant symptom or group of symptoms.

Cerebral N. is characterised by mental symptoms; there is imbility to contain and manufs. of machinery. depression, etc., necompanied by Neusalz, a tn. of Prussia in the hendaches. In many cases there is development of morbid fears, such as from Glogau. Brewing and shipplaces, as railway tunnels, small rooms, cic., and batophobia, or fear of Galicia, on the Dunajee, 45 m. S.E. rooms, etc., and batophoom, or tear of things falling, etc. In Neurosthemia of Cracow. There are from milies in cordis the heart symptoms predominate; there is continual palphation nate; there is continual palphation nand occasional sciences resembling Ujvidek), a tr. of Hungardan Ujvidek), a tr. of Hungardan the co. nate; there is continual palphation and occasional seizures resembling

a longer period. It is often associated Constipation is a frequent concoming with the condition called migraine, in tant. Sexual neurasthenia is characteristic. terised by the predominance of the sexual disturbances mentioued above. It is usually accompanied by pain in the back, neuralgic pains generally, speedily-induced exhaustion, apprehonsion of oncoming impotence, etc. Most forms of N. are complicated, and the existence of exhaustion in the nervous centres is usually demon-The essential part of any strable. treatment is 'rest cure' amidst

hygicale surroundings.

Neuritis, inflammation of a nerve.
It may be localised or multiple. In
localised N., caused by injury, cold, pressure, etc., there is considerable pain along the course of the nerve, and the part may become red and swolleu. It usually submits to treatment in a short time. Multiple N. is the simultaneous inflammation of nerve trunks, often symmetrically situated on both sides of the body. The cause may be alcoholic poisoning; lead, arsenic, mercury, copper, or phosphorus poisoning; toxic effects of diphtheria, typhold fever, malaria, influenza, etc.; gout or tuberculosis. Beri-beri is a form of multiple N. exposing the nerve and stretching it. The symptoms vary according to the Neurasthenia (Gk. νεύρον, nervo: cause. There is numbress, loss of ασθένεια, weakness), a term applied power, and alrophy of muscle in ecrtain parts, and ultimate paralysis. The only cure is elimination of the poison.

Neurode, a tn. of Prussla, in the prov. of Silesla, 45 m. S.S.W. of Breslau, with manufs. of cloth, car-pets, and cottons. Pop. 7732.

Neuroma, a tumour springing from a nerve. If it is made up of nervous tissue, it is known as a true N.; this variety is very rare. If it is made up of an overgrowth of fibrous connecting tissue, it is known as a false or

Neuroptera, see Insucrs.

Nouruppin, a tu, of Prussia in the of . des. Pop.

anging pectoris. In gastric neuras—of Baes-Bodrog, on the Dannbe, thenia the digestlye processes are dismort the terminus of the Franz-turbed, though digestlon may pro- Josef Canal. The town is the seat of ceed at quite a normal rate. Some a Greek Orthodox bishop, and the secretions are apparently ill-regu- literary and religious centre of the lated, though of normal constitution. Servians in Hungary. Pop. 31,950. near the terminus of the Franz-Josef Canal. The town is the seat of

Oedenburg and Wieselburg, 19 m. from Pressburg. It has an area of about 120 sq. m., but it is of varying size, and sometimes drics up in part. Eastward it is united with the exten-Hanság, sive marsh called the through which it is in communication with the R. Raab and with the Danube.

Neusohl (German, in Hungarian Beszterczebanya), a tn. with a magistracy, Hungary, cap. of the co. Sohl, 86 m. N. of Budapest. The cluef occupations are mining and metal-vorking. It is a Catholic metal-working. It is a Catholic bishopric see. Pop. 10,000. Neuss (the Roman Novaesium), a

tn. in the Rhine prov. of Prussia, on the Rhine at the cenfluence of the Erft, about 31 m. from Düsseldorf. There are manufs. of iron ware woellen stuffs, chemicals, paper, and

bricks, and the town also produces oil and meal. Pop. 37,300.

Neustadt: 1. A tn. in the prov. of W. Prussia, Prussia. 24 m. N.W. of Danzig. Pop. 9805. 2. A seaport in the prov. of Schleswig-Holstein, Prussia of the Relief 18 m. N.W. of russia, on the Battio, 18 m. N.N. E. of Lübeck. Pop. 5082. 3. A tn. of Ger-many in the dueby of Saxe-Coburg-Gotha, abeut 9 m. N. E. of Coburg- Pop. 7986. 4. A tn. of Prussia in the prov. of Silesia, 33 m. from Ratibor. The ohief industries are tanning, dycing, and the manuf. of damask linen, woollen stuffs, leather, and beer. Pop. 20,300.

Neustadt (a tn., Lower Austria), see

WIENER-NEUSTADT.

Neustadt-an-der-Hardt, a tn. in the German kingdoin of Bavaria, 17 m. S.W. of Mannheim. There is a good trade in wood, grain, fruit, and wine, all of which are produced in the vicinity. Its church, with several curious monuments of the counts palatine and with some ancient frescoes, was finished in the 14th century. Pop. 19,287.

Neustadt - an - der - Orla, a tn. of Germany in the grand duchy of Saxe-Weimar, 16 m. S. of Jena.

Pop. 7098.

Neustadt-an-der-Tafelfichte, a tn. of Bobemia, Austria, at the feot of Tafelfichte, the highest point in the Sudctic Mts. Pop. 5657.

Neustadtel, a tn. of Saxony, Germany, 12 m. S.S.E. of Zwickau.

Pop. 5137.

Neustadtl an der Waag, a tn. near the N.W. frontier of Hungary, 33 m. N.N.W. of Neutra. Here excellent red wine is grown, and there is a good trado in grain, wool, sheep-skins, and wax.

Neustettin, a tn. of Pomerania, the only thing to be considered; thus. Germany, 55 m. S.E. of Kolberg. It merchandise belonging to the enemy

Neusiedler-See (Fertö-tava), a lako has a considerable trade in cattle and of Hungary, between the counties of agricultural produco, as well as in timbor and spirits, and the chief in-dustries are iron founding, dyelng, brewing, and the manuf. of soap,

matches, and machinery. Pop. 11.833. Neu Strelitz, a tn. and cap. of Mcck-lenburg-Strelitz, Germany, between Lakes Tierker and Glambecker. was founded in 1773, is built in the form of an eight-rayed star, and contains the ducal palace, with a library of over 70,000 volumes, and having magnificent gardens attached. chief products are corn, meal, and timber, and there are manufs. of iron-

ware, pottery, beer, and mineral waters. Pop. 11,993. Neustria, the name given to the western div. of the Frankish empire to distinguish it from the eastern

div., Austrasia.

Neutra, cap. of the co. of Nentra, 45 m. E.N.E. of Pressburg. Its chief product is winc. It possesses a fortress and an old cathedral. Pop.

15.000.

Neutrality (Lat. neuter, neither), the state of non-participation in a war in which two or more nations are engaged, and 'neutral' states are those who do not take any part in the contest and who remain the common friends of both parties with. out favouring either to the prejudice of the other. In no other branch of international law has there been more progress than in the extension and definition of the rights and duties of neutrals. The word itself is of recent origin, as in the olden times when states were at war, all other states concerned were considered as on one side or the other. Late in the 17th century, it was recognised that neutral states should give ne assistance to belligerents, but such points as to what extent neutrals could provent their territory being used for hostile purposes, etc., were by no means clearly understood. Generally speaking, as long as a neutral nation wishes to enjoy the rights and ad-vantages of N., she must exercise strict impartiality towards both belligerents. She must not furnish either of them with troeps, arms, munitions of war, or anything in direct use in war time, and on the other hand, in matters which do not relate to war she must not refuse to one belligerent any advantage which The quesshe grants to the other. The question in regard to N. which has caused possibly more controversy than any other is that respecting neutral goods on belligerent vessels, and vice versa. It was at first held that the ownership of the goods on board the vessels was the only thing to be considered; thus,

was seized on a neutral ship, bu nentral merchandise seized under . hostile flag was restored. This syster led to so much inconvenience and irritation that the opposite principle was adopted, and neutral merchandise under a hostile flag was seized, and hostile merchandise was safe under a neutral flag. The Declaration of Paris (1856) laid down the principles that a neutral flag covered belligerent's goods, save contraband of war, and that neutral goods, save contraband of war, and that neutral goods, save contraband of war, were not liable to confiscation when found under a hostile flag. By the decision of the arbitration board in the Alabama case, it was laid down that a neutral government is bound to use due diligence to prevent the fitting out in, or departure from, any of its ports of a vessel which it has reasonable ground to believe is intended to carry was adopted, and neutral merchandise ground to believe is intended to carry on war with a power with which it is at peace; that it is bound not to permit a belligerent to make use of its ports as a basis of naval operations, or a source of recruitment of men or military supplies; that it is bound to exercise due diligence in its own ports or waters, and as to all persons within its jurisdiction to prevent any within its jurisdiction to prevent any violation of these obligations. The Treaty of Washington in 1871 raised more questions than it solved, but the general effect was to extend the duties of neutral states. The present position as to N. is briefly as follower it is the belligerents' duty to respect neutral territory and territorial waters. Neutral states have the right to repress the intercourse of neutral to repress the intercourse of neutral eitizens with eitizens of either belligerent, if desired. Belligerents have the right of bioekade, of anjary (Lat. anjaria, forced service), of visit, and search, and of the confiscation of contraband of war. Neutrals must prevent any recruiting, etc., for either prevent any recruiting, etc., for citber belligerent, and must grant impartially any privileges, etc., which are not considered as intervention in the struggle. Such are tho main outlines, but the scope of the subject is so wide that it is impossible to condense it into a short article, as so many Issues are involved in each particular point. It may be said that the trend of modern thought is to give neutrals more and more rights; such conceptions as the neutralisagivo neutrais more and more rights; such conceptions as the neutralisation of territory, the abolition of feetitious blockades, the detachment from the high sea of the 'territorial southern boundary is formed for waters,' were not dreamt of a century ago. At the Conference of the Hague in 1907, dealing with N., two fairly 300 m. of the northern district, but exhaustive conventions were adopted, and further modifications and progress may not unreasonably be expected from the conference to be held of sheep and cattle, but the leading

Nevada

contraband of war, see Contraband.
Neutral Salts, see Salts.
Neu-Ulm, a fort. in. of Swabia,
Bavaria, situated opposite Ulm in
Würtemberg, on the Dunube. Pop. 12,390.

Neuville, Alphonse Marie de (1836-85), a French painter, pupil of Dela-eroix and Picot. He exhibited for the first time in the Salon of 1859 a jarge first time in the Salon of 1859 a large first time in the Salon of 1859 a large canvas depicting an opisode in the siege of Schastopol, which made a great sensation and got him a medal. This was followed by a series of military pictures dealing with the Crimean and Franco-Prussian wars. His most famous picture is 'The Last Cartridges.' He also collaborated with Detaille in the panorama of Rezonville, one of the best works of the kind. His painting is full of vigour and movement, and betrays marked individuality of temperament.

Neuwerk, a tn. of Rhenlsin Prussia, 14 m. W. of Düsseidorf. It manufs. textile fabries. Pop. 12,350.

Neuwied, a tn. of the Rhine Province, Prussia, on the Rhine, 8 m. N.N.W. of Koblenz. It possesses an ancient castle famous for its Roman antiquities, and is the seat of the Moravian schools, founded in the 17th century. Starch, tobacco, soap, chicory, and iron goods are manufactured. Pop. 19,107.

Neuzen, or Terneuzen, a scaport, Zealand, Netherlands, situated on an arm of the Schedt, 28 m. W.N.W. of Antwerp. Pop. 9329.

Neva, a riv. of Russia, in the gov. of St. Petersburg, flows W. from the S.W. corner of Lake Ladoga to the Bay of Cronstadt, in the Guif of Finland. Its length, including windings, is about 40 m. Its current is very rapid. It is covered by drift-lee for upwards of five months in the year. An extensive traffic is carried on on its waters. canvas depicting an cpisode in the

An extensivo traffic is carried on on its waters.

its waters.

Nevada: 1. One of the south-western states of the American Union in the great Cordilleran plateau, between the Hocky Mts, and the Sierra N. The surface is plateau with an elevation of 5000 ft., but in the S. it descends abruptly to the level of the Colorado R. (600 ft. above sea-level). The elimate is very dry and the soil barren. The extreme southern boundary is formed for about 150 m. by the Colorado, and the Humboldt R. flows across over 300 m. of the northern district, but this and other smaller streams end in sait lakes known as 'sinks.' Crops are chiefly subsidiary to the grazing

silver and gold. Other minerals are Theatre. lead, sulphur, antimony, nickel and cobalt, borax and rock salt. The chief towns are Carson City, tho tho chief towns are carson cho, capital, Vlrginia City, Reno (which has a state university), Eureka, and Gold Hill. Area 109,821 sq. m. Pop. (1910) 81,875. 2. A city and co. seat of Vernon co., Missouri, U.S.A., 88 m. S. of Kansas City. The chief industries are the smelting of lead and custries are the smotting of lead and zinc, and the manuf. of paper, lumber, sheet metal, and bricks. Coal is mined in the vicinity. Pop. (1910) 7176.

Nevel, a tn., Russia, in the gov. of Vitebsk, 63 m. N.N.W. of the city of Vitebsk. Pop. 10,000.

Nevers (ancient Noviodunum), the chief tn. of the dept. of Nièvre, Erappe on the r b of the Loften tits.

France, on the r. b. of the Loire at its confluence with the Nièvre. It is the scat of a bishopric and of commerce, its trade consisting in iron and steel, wood, wine, grain, livestock, etc. There are manufs. of porcelain, agriimplements, chemical cultural glue, boilers and iron manures, goods, boots and shoes, and fur garments, and the town bas also distilleries, tanneries, and dye-works. The cathedral of St. Cyr dates back to the 14th century. Pop. 27,000. Neviansk, or Nevyanskii, a tn. of Russia in the gov. of Perm, on the Neiva R., 50 m. N.N.W. of Ekaterinburg. It is famous for its metallurgic riches and for its mint. Pop. 16,500

riches and for its mint. Pop. 16,500.
Noville, see Warwick, EARL OF.
Neville, Henry (1620-94), an English author, interested himself in politics. His activities displeased Cromwell, who banished bim from London in 1654. He entered parliament on the death of the protector, and sat at Westminster for some years. He was, in 1663, arrested, and acquitted, on the grounds of com-plicity in the Yorkshire rising. His translation of Machiavelli's works (1675) is well known, and he was the author of many effective lampoons, including Shuffling. Cutting, and including Shuffling, Culting, and Dealing in a Game of Picquet (1659). being directed against Oliver Cromwell and others.

Neville, Henry George (1837-1910), an English actor, born in Manchester. In 1861 he came to London, where he at once sprang into prominence. His first great success was as Bob Brierley in Tom Taylor's The Ticket-of-leave Man (Olympic, 1863), and this success was followed by others in Lady Clancarty and The Two Orphans. He played mainly romantic parts, for which his good looks and impassioned

occupation is mining, especially of was Sir Oliver at His Majesty's

Neville, Richard, first Earl of Salisbury (1400-60), was the son of Ralph N., first Earl of Westmorland. He acquired his title through his wife in acquired his title through his wife in 1429, laying claim to it on the death of his father-in-law. He was warden of the western marches, and as such persuaded York to lay down his arms in 1452, and when the latter got control of the government, during the king's madness, gave him his support and was made chancellor. He was defeated by the royalist forces at Ludford (1459) and fled to France, but returned in 1460 and remained in charge of London while Warwick charge of London while Warwick went to meet the Lancastrians at Northanpton. He was captured after the hattle of Wakefield, and murdered in Pontefract Castle.

Cress Neville's (Durham), DAVID II.

Nevin, a watering-place in Carnarvonshire, Walcs, 6 m. Pwliheli. Pop. (1911) 1810. N.W.

Nevis, an island in the British West Indies, which lies in 17° 14′ N. and 62° 33′ W., and is separated from St. Kitts by a strait some 3 m. wide. It bas an area of 50 sq. m., and the greatest elevation is 3596 ft. Sugar, cotton, corn, yarns, coffee, and fruit are grown. The chief tn. is Charlestown. N. with St. Kitts and Anquilla were united in 1882 to form one presidency. Pop. 15,000.

Nevis, Ben, see BEN NEVIS.

New Age, a weekly review politics, literature, and art, published on Thursdays from 38 Cursitor Street, London, E.C., and edited by Mr. A. R. Orage. Caviare to the general, A. R. Orage. Caviare to the general, it is a paper for publicists, its Notes of the Week, written with Swiftian satire and directness, being perhaps the most penetrating criticism of current affairs. Its political philosophy is a blend of Marx and Nictzselic; has pioneered the idea of Gwild Socialism (see SOCIALISM), and Guild Socialism (see Socialism), and having no advertisements criticises fearlessly and, at times, savagely. New Amsterdam: 1. A tn. of British

Guiana, on the Berbice, 63 m. S.E. of Georgetown. Thetn.itselfistraversed by canals. Pop. 9000. 2. The name given to New York City under tho

Dutch.

Newark, a municipal and parl. bor. of England, in the co. of Nottingham, on a navigable branch of the R. Trent, 16 m. S.W. of Lincoln. The parish church, a large and elegant edifice though often rebuilt, still shows traces of its original Norman character. acting were eminently adapted. For acter. There are many industries, several years he was the hero of the chiefly of an engineering character, autumn dramas at Drury Lane. One and there is a large trade in corn, of his last, and hest, performances malt, eattle, wool, and coal. The

castle of N., in which King John died | Goody Two-Shoes, Tommy Trip and in 1216, was built early in the 12th century. The ruins now form an attractive feature of a public pleasure

ground. Pop (1911) 16,142. Newark: I. A city and the eo. seat of Licking co., Ohio, U.S.A., 33 m. E. of Columbus. It is the trade centre of of Columbus. It is the trade could be an agricultural region, and manufs. stoves and furnaces, hottles, glass, cigars, rope halters, machine furniture, and bentwood. Pop. (1910) 25,404. 2. A city of New Jersey, and the control of Newark. 25,404. 2. A city of New Jersey, U.S.A., co.seat of Essexeo., on Newark Bay, about 8 m. W. of New York. There is a Roman Catholic cathedral, and the city is the see of a Roman Catholic and of a Protestant Episcopal hishop. The manuf, of shoes and other leather products, especially patent leather, became an important industry early in the 19th century. Other manufs, are felt hats, carriages, chairs, jewellery, malt liquors, cloth-

chairs, jewellery, malt liquors, clothing, brass and iron work, macbinery, chemicals, varnish, enamelled goods, corsets, elgars, buttons, and art pottery. Pop. (1910) 347,469.

Newbattle, a vil. in the co. of Edinhurgh, Scotland, 1 m. S. of Dalkeith.
Newbattle Abbey was built by David I. in 1140. Pop. (1911) 6061.

New Bedford, a seaport city of Massachusetts, U.S.A., on Buzzard's Bay, 55 m. S. of Boston. It was once the centre of the American whale-fisheries. Oil refining, tanning, boot and shoe making are carried on, beand shoe making are carried on, besides the manufacture of silk and woollen goods. It has oil and candie factories, soap factories, several large cotton-mills, hoop-iron manufactories, harrel factories, and an extensive trado in raw cotton, fish, coal, and lumber. Pop. (1910) 96,652.

Newbern, a city and co. scat of Craven co., N. Carolina, 85 m. N.E. of Wilmington. Its chief manufs, in-

clude lumher, turpentine, and cotton goods. Pop. (1910) 9961. Newbery, Francis (1743-1818), a publisher, was the son of John N., whose business he inherited in 1767. Subsequently the firm was Newhery & Harris, and in later years it was known as Griffiths & Farran. As a publisher he did not show the acumen or industry of his father.

Newbery, John (1713-67), publisher and bookseller, born at Waltham St. Lawrence, Staffs. When seventeen years old he went to Reading and procured employment in the Mercury offices. In 1745 he opened a publishing house in St. Paul's Churchyard; here he started newspapers, and amongst his contributors were Johnson and Goldsmith. He bad often meditated a library for young people—the venture was made, and it proved a great success. The well-known books. his Dog Growler, may be recalled, also the Lilyputian Magazine.

Newbolt, Henry John (b. 1862), a barrister and author, born at Bilston, Staffs.; educated at Clifton College, Bristol, and Corpus Christi College, Oxford. He became harrister at Lincoln's Inn, 1887, and practised there for two years. From 1900-4 he edited the Monthly Review. In 1892 his first hook, Taken from the Enemy, was published, and in 1895, Mordred, a tragedy. But his fame rests chiefly with Admirals All, 1897; the poems in this attracted much attention. He has also written Stories from Froissart;
The Island Race; The Sailing of the
Longships, Songs of the Sea; The Year
of Trajalgar; The Old Country; Songs
of the Fleet; The Twymans, etc.
Newbridgs, a tn. in co. Kildare, Ireland, on the Liftey, 4† m. N. E. of Kildare. It is the site of large covalu-

dare. It is the site of large cavalry

harracks. Pop. (1911) 1560.

New Brighton: 1. A bor. of Beaver co., Pennsylvania, U.S.A., 27 m. N.W. of Pittsburg. It is connected with Beaver Falls by means of a bridge. Its chief manufs. are flour, lumber, not cher manus. are nour, lumber, pottery, carriages, and machinery. Pop. (1910) 8329. 2. A former tn. on Staten Is., but now a part of New York City. 3. A watering-place in the co. of Cheshire, England, 4 m. N.W. of Birkenhead. Pop. (1911) 11,000. New Britain, a city of Hartford co., Connecticut, U.S.A., 9 m. S.W. of Hartford, Its chief manufs, are hardware to have of foundry and machine.

ware, tobacco, foundry and machine shops' goods, hosiery and knitted goods, and cuttery. Pop. (1910) 43,916. New Britain, see NEU-POMMERN.

New Brunswick: 1. An castern prov. of the Dominion of Canada, is bounded on the N.W. by the Bay of Chaleur, on the N.E. hy the Gulf of St. Lawrence and the Strait of Northumberland, on the S. by Nova Cartin and the Rev of Funday and the Saction of the S. by Nova Cartin and the Rev of Funday and the Rev of F Scotia and the Bay of Fundy, and on the S.W. hy the state of Maine. It has an area of 27,985 sq. m., and a pop. of 350,000. The coast-line is 500 m. in extent, and is indented by spacious bays, inlets, and harbours, which afford safe and commodious anchorage for shipping. The chief are Fundy, Chigneeto, and Cumberland hays, the two last being merely ex-The chief are tensions of the first; Passamaquoddy Bay in the S.; Verte, Shediac, Cocaigne, Richihucto, and Miramichi bays on the N.E., and the Bay of Chaleur, 80 m. long by 27 m. broad, in the N.W. The province of N. B. abounds in rivers. The principal are the St. John's and the St. Croix, the former 450 m. and tho latter 100 m. in length, and both falling into the Bay of Fundy; and of the rivers that flow eastward into the Gulf of St. Law-

contains numerous lakes, one of which, contains numerous lakes, one of which, Grand Lake, is 100 sq. m. in area. The surface is for the most part flat or undulating. With the exception of the district in the N.W. hordering on Canada and the R. Restigouche, no portion of N. B. is marked by any considerable olevation. The shores on the E. coast, and for 20 m. inland, are flat. The soil is deep and fertile. N. B. contains a rich and extensive wheet the state of the contains a rich and extensive wheet the state of the contains a rich and extensive wheet the contains a rich and extensive wheet the contains a rich and extensive wheet the contains a rich and extensive wheet the contains a rich and extensive wheet the contains a rich and extensive wheet the contains a rich and extensive wheet the contains a rich and extensive wheet are district. tertile. N. B. contains a rich and ex-tensive wheat producing district, the inhabitants dividing their time he-tween farming, lumhering, fishing, shiphuilding, and other pursuits. The climate is remarkably healthy, and the autumn—and especially the season called the Indian summer—is particularly agrecable. Gold and silver occur in N. B.; copper and iron ore of excellent quality abound; gypsun, plumbago, and limestone are very abundant, and the freestone of the province, unsurpassed for heauty and durability, commands a high price in the States. Fredericton is the cap., but St. John is the largest town. Lumbering and the manufacture of wood-pulp are the leading in-dustries, but coal is mined, lobsters tinned, and woollen goods, machinery, tinned, and woollen goods, machinery, sugar, and paper are also manufactured. Following the discovery of oil and natural gas, these have heen produced in large quantities. The province of N. B., fogether with that of Nova Scotia, originally formed one French colony, called Acadia, or New France. It was ceded to the English in 1713, and was first settled by in 1713, and was first settled by British colonists in 1764. Twenty years subsequently, in 1784, it was soparated from Nova Scotia, and 2. A city of New Jersey, U.S.A., lies on the S. bank of the Raritan R., at the head of navigation, 15 m. from its mouth and 30 m. S.W. of New York.

mouth and 30 m. S.W. of New York. It manufactures cotton, leather, and machinery. Pop. (1910) 23,388.

Newburgh: 1. A royal and municipal hurgh and seaport in the co. of Fifeshire, Scotland, on the Firth of Tay. Its chief manufs. are floorcloths and linen. It is also engaged in salmon fishing. Pop. (1911) 1977. 2. A city in Orange co., New York, U.S.A., on the Hudson R., 60 m. N. of New York. Its chief manufs. are cotton and woollen roods, silk, paper, cotton and woollen goods, silk, paper, machinery, and flour. Pop. (1910) 27,805.

Newburn, a vil. in the co. of Northumberland, England, on the Tyne, 5^t m. N.W. of Newcastle. It is engaged in coal mining and iron founding. It is and iron

founding. Pop. (1911) 3017. Newbury, a municipal hor. and

rence, the Richihucto, the Miramichi, the R. Kennet, 17 m. S.W. of Reading, and the Restigouche. The province Close by is the hamlet of Speen, built Close by is the hamlet of Speen, built on the site of the Roman Spinæ. chief industry is malting, and the town has a considerable woollen trade. During the Civil War in England, the neighbourhood of N. was the scene of two battles, neither of them being decisive. During the second of these battles, Donnington Castle resisted the Parliamentarians, being held by its governor Sir John Boys. Pop. (1911) 12,107.

Newburyport, a city, port of entry, and one of the co. seats of Essex co., Massachusetts, U.S.A., on the Merri-mac R., 37 m. N.N.E. of Boston. The principal industries are the manuf. of boots, shoes, celluloid collars, cotton and woollen goods, and machinery, and also shiphuilding. The city has a safe harbour. Pop. (1910) 14,949.

a saic narbour, Pop. (1910) 14,949.
New Caledonia, an island of the South Pacific Ocean, helonging to France, and lying about 720 m. E.N.E. of the coast of Queensland in Australia, in lat. 20°-22° 30° S., long. 164°-167° E. It is about 200 m. in length, 30 m. in breadth. It is of volcanie, origin, is traversed in the canie origin, is traversed in the direction of its length, from N.W. to S.E., by a range of mountains, which in some cases reach the height of about 8000 ft., and is surrounded by sand-hanks and coral-recfs. There are secure harhours at Port Balade and Port St. Vincent, the former on the N.E., the latter on the S.W. part of the island. In the valleys the soil is fruitful, producing the coceanut, hanana, mange, breadfruit, ctc. The sugar-cane is cultivated, and the vine grows wild. The coasts support considerable tracts of forest, but the mountains are harren. The inhabitants, who resemble the Papuan race, consist of different tribes. Its cap. is Noumea. N. C. was discovered by Captain Cook in 1774. In 1854 the French took official possession of it and made it a convict station. Its area is 6450 sq. m., and it has a pop. of 50,000.

Newcastle: 1. A tn. of Natal, S. Africa, near the Drakenherg Mts., ahout 130 m. N.W. of Pietermaritzhurg. It produces coal and petroleum. Pop. (whites) 2500. 2. A
tn., York co., W. Australia, 52 m.
N.E. of Perth. Pop. 1000. 3. A.
city and port on the Hunter R.,
New South Wales, 73 m. N. of Sydney. It ships coal, wool, and frozen
meat. Pop. 17,000. 4. A tn. of New
Brunswick, on the Miramichi R.,
close to its mouth. Pop. 3000. 5. The
cap. of Lawrence co., Pennsylvania,
U.S.A., on the Shenango R., 50 m.
N.W. of Pittshurg. The region in
N.W. of Pittshurg. The region in
which it is situated is rich in coal, irou, hurg. It produces coal and petrowhich it is situated is rich in coal, irou, market tn. of Berkshire, England, on and other minerals, and the chief

manufs. are tin-plate, fire-brick, flour, steel wire, glass and iron goods. Its shipping trade is also extensive. Pop. (1910) 36,280. 6. The co. scat of Henry co., Indiana, U.S.A., 41 m. N.E. by E. of Indianapolis. The chief manufs. are iron goods, furniture, carriages, pianos, and brass goods. Pop. (1910) 9446. 7. A seaport tn. in co. Down, Ireland, on Dundrum Bay, 11 m. S.W. of Downpatrick. It is engaged in fishing. Pop. 1600. 8. A market tn. in co. Limerick, Ireland, 26 m. S.W. of Limerick. Pop. 2500. Newcastle, Duke of, see CAVENDISH,

WILLIAM.

Newcastle, Henry Pelham Fiennes
Pelbam Clinton, fifth Duke of Newcastle (1811-64), entered parliament
in 1832 as Lord Levcdon, and was
Lord of the Treasury under Peel
(1834-35). When Peel returned to
power, he again accepted office, and
in 1846 became chief secretary to the
Lord-Lieutenant of Ireland. In 1851
he succeeded to the dukedom. In the
following year he went to the Colonial
Office under Aberdeen, and when the
Russian war broke out, and the War
Department was detaoled from the
Colonies, he took the Seals. He worked
strenuously to organise it, but it was
impossible to make it adequate to the
demands upon it in a short time, and,
yielding tc
1855. He
Colonies fi

Newcastle, Thomas Polham Holles, first Duke of (1693-1768), eldest son of the first Baron Pelham; assumed the namc of Holles in 1711, on succeeding to the estates of his uncle, John Holles, Duke of Newcastle. He was appointed Lord Chamherlain in 1717, and Secretary of State for the Southern Department in 1724. Thirty years later he succeeded Pelham as Prime Minister, and in 1757 formed a coalition with Pitt, but resigned as Bute came into prominence. He was Lord Privy Seal in Rockingham's first administration (1765-66).

Newcastle Chronicle, The, first established in 1764, and was the third newspaper to be published in Newcastle. It was a weekly publication, the first issue appearing on Mar. 24, 1764. In 1858 it became a daily paper and also the property of Joseph Cowen, an ardent Liberal, who continued to own it until his death in 1900.

death in 1900.

Newcastle-on-Tyne, a city, municipal co., and parl. hor. of Northumberland, 272 m. N.W. of London. of Side and the Sandhill' may on the l. b. of the Tyne, 8 m. from the see. It is connected with Gateshead, in Durham, on the opposite hank of the Tyne, by three fine bridges The the Tyne, by three fine bridges The city has an interesting history (see and Heaton Parks, the Town Moor

John Brand's History and Antiquities, 1789), and slight remains antiquity may still be seen. Roman station was by the Pons Ælii, which is said to have crossed the river on the site of the present hydraulic swing bridge. There are traces of the old walls, which according to Leland far surpassed for strength and munificence all the walls of the citics of England.' Before the Conquest the city was known as Monkchester. It owes its present name to the Norman castle huilt by Henry II. about 1080 on the site of an older Roman fortress. It helongs to the corporation which has placed it under the charge of the Newcastle Society of Antiquaries. As a port and coaling centre Newcastle came into prominence towards the end of the 15th century, though coal was dug up in the reign of Edward III. According to a charter of the reign of Elizabeth, forty-eight persons were appointed to load coal here, and in the year 1699, 200,000 chaldrons were exported. Its commercial prosperity is due to its position on a tidal river, and to the large quantity of excellent coal found in the neighbourhood. The principal docks are the Northumberland, the Albert Edward, and the Type. The quay, which is fitted with all mechanical appliances and com-municates with the North-Eastern Railway, forms a fine thoroughfare, a mile in length. The banks on both sides of the Tyne are lined with quays, factories, warebouses, and sblphuilding yards. The chief exports, apart from coal, are iron and steel goods. machinery, obemicals, and copper. In 1910 the exports were valued at £11,308,177, and the imports at £9,442,944. Newcastle is the sec of a bishop, and returns two members to parliament. The local government is in the hands of the lord mayor, 19 aldermen, and 57 councillors. The aldermen, and 57 councillors. The most notable of its public huildings are: the cathedral, in the Decorated andP (12th cathe town and ti

There are colleges of medicine and science, helonging to the Durham University, the Rutherford College and Commercial Institute, and the Royal Free Grammar School (1525). The chief residential suburh is Jesmond (Jesus Mount). There are some fine streets, the mest notable being Grainger Street and Grey Street. In the 'Side' and the 'Sandhill' may he seen some old Elizabethan houses. There are a number of parks and

and Castlo Leazes. Among the societies founded in Newcastle are the Tyneside Naturalists' Club (1846), the North of England Institute of Mining Engineers (1852), the Newcastle Society of Antiquaries, and the Fine Arts Society. Pop. (1911)266,671.

Newcastle-under-Lyme, a markettn. and parl. and municipal hor. of
Staffordshire, England, on the Lyme
brook, 2 m. W. of Stoke-on-Trent.
The parish church of St. Giles has a
square tower of red sandstone dating
from the 12th century, the remainder
having been rebuilt hetween 1873-76;
the grammar school dates from 1602.
The town was formerly noted for its
manuf. of hats. Now the chief industries are brewing, malting, tanning, and the manuf. of army clothing, paper, cotton, etc. Pop. (1911)
20,204.

New-chwang, or Nui-chwang, a treaty port in S. Manchuria, China. The town proper stands on the Liao R., 40 m. from the coast, but the name is usually applied to the port. 30 m. nearer the coast of the Gulf of Lao-tung, which was originally called Muh-kow-ying. The Liao R. is here about ½ m. wide, but the port is iccbound in winter. The surrounding country is flat and marshy. The chief industry is the manufacture of bean oil and bean cake, which form the chief exports, with raw beans, ginseng, and raw silk. There are gold, iron, and silver mines. Pop. 50,000. New College, Oxford, founded by William of Wykeham in 1379 as the College of St. Mary of Winohester, the other title arising from the existence of St. Mary's College. The fino buildings still retain much of the founder's design, and are notable for

William of Wykeham in 1379 as the College of St. Mary of Winohester, the other title arising from the existence of St. Mary's College. The fino buildings still retain much of the founder's design, and are notable for the chapel containing the founder's pastoral staff, the cloisters (consecrated in 1400), and the massive detached tower. New buildings have been largely added. The lovely grounds contain portions of the old city wall.

Newcomb, Simon (1835-1909), an American astronomer, born in Nova Scotia. In 1859 he was appointed professor of mathematics to the U.S. navy, and later astronomer at the naval observatory, Washington, where he superintended the creetion of the 26-in. equatorial telescope there. From 1871-74 he became appointed secretary to the U.S. Commission for observing the transit of Venus, and in 1882 observed the same at the Cape of Good Hope, then, from 1881-93, he was professor of mathematics and astronomy to Johns Hopkins University. He interested himself in the eellpses recorded by Ptolemy in the Almagest, also the Arabian and later astronomers to the

Among the Rewritten Among the problems of gravitational astronomy, He wrote numerous books on as-Institute of tronomy and sociology. Consult his 2), the New-Reminiscences of an Astronomer, 1903.

Reminiscences of an Astronomer, 1903.

Newcome, William (1729-1800),
Archbishop of Armagh, was born at
Abingdon. In 1765 he became a
D.D., and the year following he went
to Ireland as chaplain to the LordLieutenant. He was soon promoted
to the see of Dromore, and in 1795 he
was made Primate of Ireland. Among
lis works are Harmony of the Gospels
(1778), and an Improved Version of
the Twelve Minor Prophets (17851809).

Newcomen, Thomas (1663-1729), an inventor of the atmospheric steam-cngine, born at Dartmouth. In 1705, together with Savery and John Calley, he took out a patent for a fire-engine, notable for its safety and economy. The engine of James Watt improved upon this by having a separate condenser. In 1723 he set up an engine for drawing water at Griff, near Coventry.

New Cumnock, a tn. of Ayrshirc, Scotland, 5 m. S.E. of Cumnock. It is the centre of a rich mining district.

Pop. (1911), 5661.

New Decatur, a city of Morgan co., Alabama, U.S.A., 1 m. S. of Decatur. It contains iron and wagon works, oil mills, cotton compresses, and spoke and handle factories. Pop. (1910) 6118.

(1910) 6118.

New Dongola, Maraka, or El-Ordeh, a tn. of Egyptian Sudan, N.E. Africa, on the Nile. An important tradinguistation. Pop. (estimated) 20,000.

Newdigate, Sir Roger, fifth Baronet (1719-1806), an antiquary, was a collector of ancient marbles, vases, and books. Two marble candel abox found.

Newdigate, Sir Roger, fifth Baronet (1719-1806), an antiquary, was a collector of ancient marbles, vases, and books. Two marble candelabra found in Hadrian's villa he purchased and presented to the Radeliffe Library, Oxford, and to that university, where he had been educated and which ho represented in parliament for many years, he made other benefactions. He is, however, now principally remembered as the founder of the Newdigate prize for English verse at Oxford.

New England. a collective name applied to the states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut, in the N.E. of the U.S.A. Arca 67,400 sq. m. The coasts were explored by Sir Humphrey Gilbert in 1583, and the district was explored in 1614 by Captain John Smith, who suggested the name.

Newent, a tn. of Gloucestershire, England, 9 m. N.W. of Gloucester. Manufactures linen and nails. Pop. (1911) of rural dist., 6965.

New Forest, the name of a dist. in

and bounded on the W. hy the R. Avon, on the S. hy the coast, and on the N.E. hy a line running from the borders of Wiltshire along the Southampton Water Area about 145 sq. m. This triangle appears to have been a great wooded district from the carliest times, and its present name dates from the Norman Conquest, when it was regularly afforested. Since that period it has remained a possession of the crown. The principal trees in the forest are the oak and beech, with large patches of holly as underwood. The oaks have been much used as timher for the British navy. Tracts of exquisite woodland scenery are overywhere to be met with. The afforestation of this district the Conqueror, enforced hу savagely severe forest laws, was regarded as an act of the greatest cruelty, and the violont deaths met by hoth of his sons, Richard and William Rufus-both of whom were killed by accidental arrow-wounds in the forest-were looked upon as special judgments of Providence. A small hreed of pony lives wild under its sheltor. See J. R. Wise's The New Forest, its History and Scenery. 1883. Newfoundland, an island and British colony of N. America, lies in the Atlantio Ocean, at the mouth of the Gulf of St. Lawrence, separated from Lahrador on the N. by the Straits of Belle Isle (ahout 12 m. broad), and extending in lat. from 46° 38′ to 51° 37′ N., and in long. from 52° 44′ to 59° 30′ W. In shape it resembles an equilateral triangle, of which Cape Bauld on the N., Cape Race on the S.E., and Cape Ray on the S.W. form the angles. It is 370 m. in length, 290 m. in hreadth, ahout 1000 m. in circumference, and has an area of 42,734 sq. m. The island, as seen from the sea, presents a wild and sterile appearance. Its surface is diversified by special judgments of Providence. pearance. Its surface is diversified by

mountains, marshes, barrens, ponds, and lakes. The mountains in the Avalon Peninsula (stretching S.E. from the main portion of the island, and connected with it by an isthmus of only ahout 3 m. in width) rise, in some cases, to 1400 ft. above scalevel; while, hoth here and along the western shore, the height of 1000 ft. is frequently reached. The number of the lakes is remarkable, and it has the lakes is remarkable, the been estimated, though, perhaps, with some exaggeration, that about one-third of the whole surface is covered with fresh water. The covered with fresh water. The barrens occupy the tops of hills. The coast-line is everywhore deeply indented with bays and estuaries affording safe harbours. Of these inlets, the principal, beginning from the northern extremity of the island,

Hampshire (q.v.), triangular in shape, are Hare, White, Notre Damo, Bonn-find bounded on the W. hy the R. Avon, on the S. hy the coast, and on Placentia, Fortune, St. George's, and the N.E. hy a line running from the St. John's bays. The rivers, none of borders of Wiltshire along the which are navigable for any distance. communicate between the lakes of the interior and the sbore, and are narrow and winding; occasionally, however, they are turned to account in driving machinery. The main streams are the Exploit, with its affluent the Great Rattling, and the Humber. The soil is sterile and unproductive, although there is considerable cultivation along the seaboard of the settled districts. The chief exports consist of dried cod, cod oil, seal skins, seal oil, tinned lobsters, herring, copper and copper ore, and iron ore. The N. fisheries dispute, which was settled at Washington in 1909, was satisfactory to British claims. The government is administered by a governor, au executive council, and a legislative council, and a house of assembly. Pop. 237,531. Labrador (area 120,000 sq. m.), the most easterly part of the productive, although there is consq. m.), the most easterly part of the American continent, is dependent on

N. Pop. 4096.
The early history of N. is involved in obscurity. It was discovered June 24, 1497, in the reign of Henry VII., by John Cahot. It was visited by the Portugueso navigator, Gaspar de Cortereal, in 1500; and within two years after that time, regular fisheries had been established on its shores hy the Portuguese, Biscayans, and French. Sir Humphrey Gilbert, with his ill-fated expedition, arrived in St. John's Harhour, August 1583, and formally took possession of the island in the name of Queen Elizahetb. In the return voyage, the expedition was scattered by a storm, and the commander lost. The history of the island during the 17th and part of the 18th centuries is little more than a record of rivalries and feuds between the English and French fishermen; but by the Treaty of Utrecht (1713) the island was ceded wholly to England. The island of Anticosti has been included since 1809.

Newfoundland Dog. Few breeds of dogs are associated with so many accounts of canine instinct, devotion, and sagacity as the N.D., which was introduced—probably in the late eighteenth century—from British eighteenth century — from British North America, where it had been accustomed to a very hard life on rough farc, and had long been bred for intelligence and taught to take to water without hesitation. It is in fact unrivalled as a water dog, and is much assisted by the olly nature of the days, chargette cost and by its its dense, straight coat and by its partly webbcd feet. Newfoundlands of the time when Sir Edwin Landseer

immortalised the breed by his painting, 'A Distinguished Member of the Humane Society,' were of various But there are now two colours. established varieties, the black and the white and black. Other colours. such as bronze or red and white, are not favoured. In both varieties the head is broad and massive, with short and square muzzle, small ears and small, dcep-set cyes without haws. The back is broad, nock strong and short, legs very strong, and the feet large and round. The chest is deep and broad, and the tail thick and long enough to reach just below the hock. The general appearance is that of a dog of great strength and activity for his build and size. The movement is free, and the loose swinging of the body between the legs, giving a slight roll to the gait, is characteris-According to the Newfound. land Club's standard, the weight should be not less than 110 lbs. for a bitch and not more than 140 lbs. for a dog, while the average height is put at 25 and 27 in. respectively, but considerably larger animals are not uncommon. Newfoundland puppies need plenty of lean meat, both raw and cooked, as soon as they are able to take it, and they must have regular and froquent exercise.

Newgate Prison, a former prison in London, situated at the W. cnd of Newgate Street, opposite the Old Bailey. It was begun in the reign of Balley. It was begun in the reign of Henry I., and is mentioned as a prison in 1207. In 1241 a sum of 20,000 marks was exacted from wealthy Jews of London to repair the struc-In the 15th century funds for its rebuilding were left by the will of Sir Richard Whittington. It was destroyed in the great fire of 1666, but rebuilt about 1770. It suffered much damage by fire during the No-Popery damage by fire during the No-Popery riots of 1780, when 300 prisoners were let loose. (See Barnaby Rudge.) Mrs. Fry began ber labours for the improvement of the condition of prisoners there in 1808, and it ceased to be used as a debtors' prison in 1815 and as a place of incarceration in 1877. Executions took place within it after 1868. In 1904 it was demolished, and the site is now occupied by lished, and the site is now occupied by the Middlesex Session House. The noted prisoners who have been confined in it include George Wilkes, Daniel Defoe, Jack Sheppard, Titus Oates, and William Penn.

New Granada, see Colombia. New Guinea, or Papua, a large island (the next in sizo to Australia) in the Eastern Archipelago, lying N. of Australia, and separated from it by the Arafura Sea and Torres Straits the Arafura Sea and Torres Straits (80 m. wide). Length (E. to W.) about 1500 m.; breadth 30 to 430 m.; area about 250,000 sq. m. It is divided politically between Great Britain (S.E. and S.), Germany (N.E. and Holland (W.). The island is very irregular in shape, the coast being indented by numerous deep bays, such as Geelvink Bay and the Gulf of Papua. The coast is monntainous and rocky in the N. and S.E., but low and marshy in the S.W. and but low and marshy in the S.W., and large numbers of small islands lie off The interior is still little known, but is very mountainous, rising in the Charles Louis Mts. to over 16,700 ft. Mt. Trafalgar is an active volcano. The chief rivers are the Baxter, Fly, Bamo, Philip, Turama, Aird, Aivel, Kaiserin Augusta, and Amberno, several of which are navigable. The climate is hot and humid in the lowlands, where fever is very prevalent, but comparatively healthy at an elevation of 3000 ft. The rainfall is very heavy, reaching 150 in. in parts. The vegetation is dense and luxurious, mainly resembling that of the Malay Archipelago, with some Australian types. Fruit and spices are also abundant. The animals are few, mainly marsupals, but birds are abundant. The mineral wealth is little explored, but some gold and plumbago have been found. The plumbago havo been found. The natives, classed as Papuan negroes, have a considerable admixture of Malayan and Polynesian blood, and belong to the Melanesian division. They are usually medium or small in stature, with a narrow head and slight chin. Some of the inland tribes are very savage and addicted to cannibalism. Pottery, woodcarving, and rope-making are the main industries, and bêche de mer, copra, valuable woods, rubber, pearls, and agricultural products are exported. The island was discovered by a Portuguese, De Abrea, in 1511, and named Papua by De Menesis in 1526 and New Guinea by De Orterz in 1545. The Dutch annexed some parts of the W. coast in the 18th century; in 1793 the East India Company formally annexed the island. In 1848 Holland annexed the country W. of New Glasgow, a tn. of Pictou co., Nova Scotia, Canada, on East R. 10 m. S.E. of the seaport of Pictou. There is an important sbipbuilding industry. Coal mines are worked in the neighbourhood. Pop. 5000.

accordance with which the British-town contains a 12th-century Nor-Dutch boundary runs from the month man church. Pop. (1911) 6665.

of the Bensbach, N., to the Fly, and along it to 141° E. The British-tothian, Scotland, on the Firth of German boundary runs from 5° S. in Forth, 2½ m. N. of Edinburgh. Pop. 141° E. to 6° S. in 144° E., thence to (1911) 7600. Dutch boundary runs from the month of the Bensbach, N., to the Fly, and along it to 141° E. The British-German boundary runs from 5° S. in 141° E., thence to 80° S. in 147° E., thence along 80° S. British N. G. has an area of 88,000 sq. m., and a population of about 400,000. Chief ports, Samarai and Port Moresby (cap.). Dutch N. G. has an area of 152,000 sq. m., and a population of over 600,000. Chief port, Dorch. German N. G., or Kaiser Wilhelm Land, has an area of 70,000 Wilhelm Land, has an area of 70,000 sq. m., and a population of 116.000. Chief ports, Astrolabe Bay, Friedrich Wilhelm Hafen, and Finsch Hafen. See C. G. Rawlings, The Land of the

New Guinea Pygmies (1913).

New Hamburg, a vil. of Waterloo
eo., Ontario, Canada, on R. Nith,
75 m. W.S.W. of Toronto. Pop.

1500.

New Hampshire (the 'Granite State'), one of the New England states and one of the original thirteen states of U.S.A., lying W. of Maine and N. of Massachusetts, with 18 m. of coast. Area 9031 sq. m. The surface is largely mountainous, the chief range being the White Mts. in the N. (Mt. Washington 6293 ft.). There are numerous rivers, the chief being the Merrimae, Connecticut, and Androseoggin, which afford plentiful water-power, and many small lakes. Hay, potatocs, eorn, fruit, and vegetables are grown, and forest trees are abundant. The elimate is temperate, with long winters. The manufactures are numerous and important, and include boots and shoes, cotton goods, woollens and worsteds, hosiery goods, wooleds and worst-variable and leather goods. There are some good granite quarries. Cap., Concord (21,497). Principal towns: Manelester (70,063), Nashua (26,005). Dover (13,247). N. H. was settled by Englishmen in 1623, and made part of Massachusetts Bay in 1641, and a royal province in 1679. Pop. (1910) 430,572.

New Hanover, a magisterial dist. of Natal, S. Africa, 35 m. N.W. of Durban, and traversed by the Pieterma-Greytown Railway. ritzburg to Area 520 sq. m. Pop. 1600 whites,

15,900 natives.

New Harmony, a tn. of Posey eo., Indiana, U.S.A., on Wabash R. and Illinois Central Railway, 13 m. N. of Vernon. There are floor mills and briek works. Pop. (1910) 1229.

Newhaven, a scaport to. of Sassex, England, on the English Channel at the mouth of the R. Ousc, 4 m. S.E. of Lewes. It is a bonding port and is a gently undulating plain, sloping has regular cross-Channel communitowards the E. and W. It is watered to the Hudson, Passalo, Haekcnsack, and a coastguard station, and the Raritan, Delaware, etc., rivs., and h

New Haven, co. seat of New Haven eo., Conn., U.S.A., at the head of New Haven Bay, 4 m. from Long Island Sound. It has many handsome buildings, public squares, parks, and gardens. It is the seat of Yale University. gardens. It is the seat of Yale University (q.v.). It is a commercial distributing centre, and has mannfactures of carriages, rifles, olocks. hardware, and corsets. Pop. (1910)

133,605. New Hebrides, an archipelago of Polynesia in the Pacific Ocean, lying between 13° S., 166° E., and 20° S., 170° E., and extending over 500 m. The total area is about 5100 sq. m., and there are about a dozen larger islands and numerous smaller ones. The largest is Espiritu Santo (75 m. by 40 m.), discovered by Quiros in 1606. The islands are volcanic and free from coral reefs. The soil is rich and deep, and the surface is densely wooded, and produces bread fruit, sago-palm, bananas, sugar-cane, yam, taro, arrowroot, oranges, pineapples, and coffee. Animal life is scarce, but and collec. Animal life is scarce, such thaling is carried on in the surrounding seas. The rainfall is heavy, and the climate unhealthy for Europeans. The natives are Melanesians and Polynesians. There is steamboat companies. munication with Australia. about 50,000, including several hun-

dred Europeans. Newhills, a tn. of W. Aberdeenshire, Scotland, 4½ m. N.W. of Aberdeen. Pop. (1910) 6419.

New Holland: 1. A small ferry port on the Lincolnshire shore of the Humber, England. 2. A former name for Australia (q.v).

New Iberia, a tn. of Iberia par., Louisiana, U.S.A., 125 m. N. of New Orleans. It has manufs. of cypress, lumber, cotton-seed oil, soap, mineral waters, and building sundries. Pop. (1910) 7499.

New Ireland, an island of the Bismarck Archipelago, now called Nen-mecklenburg (q.v.). See also BISMARCK

ARCHIPELAGO.

New Jersey, a N.E. state of U.S.A., in the N. Atlantic group. It was the third of the original thirteen states which ratified the Federal Constitution. Area 7514 sq. m. The N. of the state is hilly, being intersected by the Blue Mt. and Highland Range, belonging to the Appalachian system, and several other ridges. The state

manganesc, talo, soapstone, and graphite. Manufs. are the chief industry, among them hoing textiles of all kinds, leather, foundry and machine-shop products, petroleum and brewing products, chemicals, and pottery. Cap., Trenton (96,815). Chief towns: Newark (347,469), Jersey City (267,779). Paterson (125,600). N. J. was discovered by John Cahot in 14b'; it was claimed hy the Dutch, but passed into English and the Dutch, but passed into English New Jersey Tea, see REDROOT.
New Jersey Tea, see REDROOT.
New Jerusalem Church, see Sweden

BORG. New Kensington, a tn. of Westmorland co., Pennsylvania, U.S.A., on Allegheny R., 18 m. E. of Pittsburg. Pop. (1910) 7707.

New Lambton, a vil. of Kahihah co., New South Wales, 70 m. N.E. of Sydney, with coal mines. Pop. 1600. Newlands, a vil. of Cape of Good Hopo, S. Africa, 4 m. S.E. of Cape Town, of which it forms a suhurb together with Claremont. (with C.) 15,000.

Newlands, John Alexander Rena (1838-98), an English chemist. After 1865 practised as an analytical and consulting chemist. His name is associated with the conception of tho theory of periodicity among the chemical olements—the Law of Octaves—later developed by Mendelection delection delection and Lothar Meyer. His papers on the subject were collected in The Discovery of the Periodic Law, 1884.

New London, a scaport city of New London co., Conn., U.S.A., at mouth of Thames R., 50 m. E. of New Haven. The harhour is good. There are manufs. of silk, woollens, and cotton; shipyards, foundries, sawmills, etc.

Pop. (1910) 19,659.

Newlyn, a seaport of St. Ives div., Cornwall, England, 11 m. S.W. of Penzance. It has a good harbour, and a fishing industry. Pop. (1911) 4500. Newmains, a tn. of Mid-Lanark-

Newmains, a tn. of Mid-Lanark-shire, Scotland, 2 m. N.E. of Wishaw. Near it are the Coltness Ironworks. and coal is mined. Pop. (1911) 2800.

Newman, Francis William (1805-97), an English scholar and man of letters, younger brother of Cardinal N., in London. In 1826 he hecan fellow of Balliol, hut resigned in

numerous small lakes. Off the coast classical tutor at Bristol College, is a line of sandbars, enclosing lagoons and marshes. The land is well wooded and fertile. Ccreate professor of Latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at University College, London, 1846-63. He then depend on the coast latin at Uni and free thought forms a curious contrast to the religious development of his brother. His works include: Catholic Union, 1844; History of the Hebrew Monarchy, 1847; The Soul, her Sorrows and Aspirations, 1849; Phases of Faith, or Passages from the History of my Creed, 1850; The Odes of Horace translated into Unrhymed English Metres, 1853; The Iliad, etc. Newman, John Henry (1801-90), an English cardinal, was the eldest child of John N., a hanker. In 1816 he entered Trinity College, Oxford; two years later he gained a scholarship, and in 1820 he took his B.A. degree, naving lailed to obtain any high academic distinction. In 1822 he was awarded a fellowship at Oriel, the acknowledged centre of Oxford intellectualism, and in the following year the same honour fell to Pusey. In 1826, when N. obtained a tutorship, Richard Froudo hecame fellow. Having assisted Hawking to the having failed to ohtain any high Having assisted Hawkins to the provosship of Orici, N. was appointed to the vicarage of St. Mary's, Oxford, which Hawkins had just vacated. After resigning their fellowships because Hawkins failed to recognise 'the substantially religious nature' of their office, N. and Fronde went abroad to the Mediterranean and to Rome, where they composed many of the short poems afterwards collected in the Lina Apostolica (1834). It was during this tour, whilst he lay becalmed in the straits of Bonifacio, that N. wroto the beautiful hymn, LeadKindly Light. The Oxford Movement dates from N.'s return home. In July 1833, he resolved with Froude and a few other friends and thinkers to uphold the integrity of the Prayer Book, and to defond the doctrine of apostolic succession. In September of the same year he hegan his Tracts for the Times, and at the same moment that he was publishing these he was expounding the doctrines therein expressed from the pulpit of St. Mary's. A chief source, if not the mainspring, of that torrent of religious Iceling which passed away from Oxford to all parts of the kingdom must be looked for in the intense nagnetic ho eager dialec-

through conscientious scruples, time a travelled in the East, joining a leading Tractarian. It was his study Baptist Mission at Bagdad. He re- of the early fathers, of Athanasius, turned to England in 1833, and was Origen, and Clement, and of the

filled his mind with doubts as to the world. Pop. (1911) 10,483. justice of Anglicanism. In 1841 he number ny mis 'Tract 90,' in which he argued that the Articles do not disavow Catholicism. He retired to littlemore in 1842, renounced the 122,634 sq. m. It forms part of a living of St. Mary's in 1843, and at rocky tableland, the foundation of the same time recanted all his earlier the Rocky Mts. and the Sierra Modra adverse criticism of the Rockiel 122,634 sq. m. raised a storm of indignation against INGS. himself by his 'Tract 90,' in which he adverse criticism of the Romish Having entered the priest-Church. hood, he founded the oratories at Birmingham (1847) and London (1850). In 1852 he was fined £100 for libelling an apestate monk, Achilli, notwithstanding he had amply de-monstrated the truth of his accusations. His splendid and wonderfully dignified Apologia pro Vila Sua was a reply to the 'grave and gratuitous slander' which Charles Kingsley set down against him in Macmillan's Magazine (1864). In it the author traces his mental development with a frankness which must have been repellent to so sensitive a nature, hut which must for ever silence any who are inclined to question the transparent purity of his motives or the singleness of his aims. From this Apology 'it is clear that N. was from the first actuated by his conception of

an infallihle church, and that a longing to attain, or at least approach to, this ideal alone induced him to transfer his allegiance to the Roman Church, which seemed the one 'divine kingdom 'on this earth. The three years of fasting, prayer, and meditation which he passed in comparative seclusion at Littlemore (1842-45) are a sufficient indication of the grave and earnest spirit in which he took this step. In 1879 he was created cardinal at Rome, a dignity which Pope Leo At Rome, a dignity which Pole Lee Still, conferred on him largely at the instance of Manning. N. died at Edgbaston in 1890. See Lives hy Meynell (1890), R. H. Hulton (1891); Letters and Correspondence, 1891; Charles Sarolca, Newman's Theology,

1908. Newmarket, a market tn. of England, famous for its horse races, is situated in a valley 13 m. E.N.E. of Cambridge, and is partly in the county of that name and partly ln Suffolk. It contains many well-huit and elegant houses, the residences in many cases of gentlemen who are drawn hither from their interest in the Turf. The market-house and the famous Jockey Cluh are the chief edifices. Malt-making and hrewing are carried on to some extent; hut

Monophysite controversy that first is said to be one of the finest in the

Newmarket Stakes, see RACE MEET-

the Rocky Mts. and the Sierra Madre ranges. In the E. is the Llano Estacado, a harren plain, which rises to mountain ranges in the centre of the state, the W. heing mainly plateaux. It is watered by the Rio Grande and its affinent, the Rio Pecos, the Canadian R., and the trihutaries of the 'olorado R. Much of the land is fertile under irrigation. and cereals, fruit, vegetables, and cotton are grown, while pasture is abundant, and there is much good forest land. The mineral wealth includes gold, silver, copper, lead, zinc, coal, granite, limestone, sandstone, and marhle. The main industries are car-construction, lumber and timber work, and flour milling. Cap., Santa Fé (5072). Chief towns: Alhuquerque (11,020) and Roswell (6172). (1910) 327,301.

New Milford, a tn. and the co. scat of Litchfield co., Connecticut, U.S.A., 30 m. N.W. of New Haven. It manufs.

hats, pottery, furniture, and lime.
Pop. (1910) 5010.
New Mill, a tn. in the W. Riding of Yorkshire. England, situated near to Kirkhurton. Pop. (1911) 4569.

New Mills, a tn. of Derbyshire, England, on R. Guyt, 6 m. S.W. of Glossop, Has cotton and calico manufs. and coal mines. Pop. (1911) 8999. Newmilns and Greenholm, a tn.

and police hor. of Ayrshire, Scotland,

and police hor. of Ayrshire, Scotland, on the Irvine, with manufs. of laces and muslins. Pop. (1911) 4806.

New Model, the name given to the army organised by parliament on Feh. 15, 1645. It was formed on the plan of Cromwell's Ironsides, and was under the command of Sir Thomas Fairfax, while Gromwell beld the position of ligutenant. held the position of lieutenant-general. It was successful in deelding the issue of the hattle of Naschy.

Newnes, Sir George (1851-1910), a magazine and newspaper publisher, a native of Matlock, Derhyshire. He ensured his first success in the publishing world by his production of *Tit-Bits* in 1881, which eventually led to his opening the present offices in Burleigh Street and Southampton Street, Strand. In 1885 he became are carried on to some extent; but a member of parliament, sitting on the town owes its prosperity to the race meetings held here seven times annually. The race-course of N., owned partly by the Jockey Clab, and partly by the Duke of Rutland, other magazioes and papers which

and C. B. Fry's Magazine.
Newnham College, for the higher education of women, at Cambridge, was organised in 1873 and opened in 1875. Five women students came to study at Cambridge in 1871, twenty-five in 1874, and 220 in 1912. The college was incorporated in 1880, and since 1881, with a few reservations, the students have enjoyed all the scholastic privileges offered by the University of Cambridge: their names appear in the tripos or honours lists of the University, but they are not allowed to hold degrees. The buildings include North Hall (1880), Clough Hall (1888), Pfeiffer Build-ing (1893), and Poile Hall (1910). There are fifteen resident lecturers. The fces are about £35 a term for board, lodging, and instruction.

New Norfolk, a tn. of Buckingham eo., Tasmania, 21 m. N.W. of Hobart, on the R. Derwent. Pop. 1200.

New Orleans, chief city and seaport of Louisiana, U.S.A., on the Mississippl R., chiefly on the l. h. The largest municipal limits are coextensive with those of the parish of Orleans, and among the suburhs are Westwego, Gretna, McDonoghville, and Algiers, its western district, with a river frontage of 3 m. The sito on which the city is huilt is almost perfeetly lovel. The climate is not marked by extremes of either heat or cold. The French or Latin quarter cold. The French or Latin quarter of N. O. is separated from the American quarter, or New City, by Canal Street, the centre of the retail trade, and just helow this street are many of the most important huild-ings of the city. The Custom House, built of granite, is one of the largest and most important edifices in the U.S. Then there are the Cotton Exchange, City Hall, Criminal Courts, Howard Memorial Library, the new post office, and several handsome churches and other buildings. The French quarter of N. O. is that part closely connected with the history, poetry, and romance of the city, and the influence of the French and Spanish régime still survives in the mode of life, customs, holidays, and social observances. The most important industries are sugar-refining, rice-cleaning, and the manuf. of cotton-seed goods, cigai etc. Pop.

he founded or edited are: The Strand, shire, Scotland, 11 m. S.W. of Fraser-Magazine; The Ladies' Field; The burgh. In the vicinity are large Wide World Magazine; Country Life; granite quarries. Pop. (1911) 2200.

Stante quartes. Fop. (1811) 2200.

New Plymouth, the cap, and a port of the dist, of Taranaki, North Is., New Zealand, 160 m. S.W. of Auckland. It has an extensive harbour. Pop. 5200.

New Pomerania, see NEU-POMMERN.

Newport: 1. A parl and municipal bor., market tn., and river-port of England, chief town of the Islo of Wight, and situated near the centre of that island, on the Medina, which is navigable up to this point. Thomas's Church, founded in 1854, on the site of an ancient structure huilt in the reign of Henry III., is a handsome edifice, and contains a monument erected by Queen Victoria in memory of the Princess Ehzabeth. daughter of Charles I., who died at Carisbrooke Castle, September 8, Carisbrooke Castle, September 8, 1650. Ahont a mile north of N. is Carisbrooke Castle, where the king was confined under the guardianship of Colonel Hammond for twelve months (1647-48). There are several important institutions in the vicinity. as the Alhany Barracks, the House of Industry, and the Parkhurst Prison for juvenile convicts. Mannis. of lace are carried on to some extent. Vessels of considerable tonnage can ascend to the quay at high tides. Pop. (1911) 11,154. 2. A municipal and co. bor. of 11,134. 2. A municipal and co. oor, or Momouthshire, England, is seated on the Usk, 19 m. S.S.W. of Monmouth. It was formerly a walled tn, defended by a castle, the ruins of which still stand. The inhabitants are engaged in shipbuilding, the manuf. of agricultural implements, iron founding, and the shipping of coal. The ancient church of St. Woollos dates from Saxon times. There is oxtensive dockage and wharfago, and the tn. combines with Usk to send one member to the Honse of Com-The total trade mons. exceeds £6,000,000. Pop. (1911) 83,700. 3. A seaport of Fifeshire, Scotland, on the Firth of Tay, opposite Dandee. Pop. (1911) 3643. 4. A city and the cap. of Newport co., Rhode Is., U.S.A. It on Newport co., Khode Is., U.S.A. It is a very fashionable summer resort, and has also a good harbour. Close hy is situated the U.S. torpedo station. Pop. (1910) 27,149. 5. A city and the cap. of Campbell co., Kentucky, U.S.A., on the Ohio R., opposite Cincinnati. There are flour mile and iron foundries and resurfs. mills and iron foundries, and manufs. of machinery and spirits. Pop. (1910) 30,309.

etc. Pop.

90,000 negroes.

New Philadelphia, a city and the cap, of Tuscarawas co., Ohio, U.S.A. and that, together with its shipping Manufs. include iron and woollen goods. Pop. (1910) 8542.

Naw Pilsligo at not Abardon New Pitsligo, a tn. of Aherdeen | shipbuilding yards, iron works, coal

wharves, lumber mills, and dry docks. Pop. (1910) 20.500.

New Providence, see BAHAMAS.

Newquay, a tn. and watering-place on the N. coast of Cornwall, England, about 11 m. N. of Truro. It has good pilchard fisheries. Pop. (1911) 4415.

New Red Sandstone, see TRIASSIC. New Richmond, a scaport of Bonaventure co., Quebec, Canada, on the Bay of Chaleur, 60 m. E. of Quebec.

Pop. 2000.

New River, an English artificial ent New River, an English artificial cut or channel, now abont 27 m. long, stretching S. from Chadwell and Amwell Springs, Hertfordshire, just S.W. of Ware, augmented from the Lee (Lea) at Broxbourne, and conveying these waters into reservoirs at Hornsey and Stoke Newington (N. London), the latter having a capacity for holding 92 000 000 cm. capacity for holding 92,000,000 gallons. It affords a great part of the London water supply. Begun by Sir H. Myddleton (d. 1631) in James L's reign (1609), it was completed by a corporation in Hertfordshire and Middlesex (1620). The New River Middlesex (1620). The New River Head reservoir at Clerkenwell was opened in 1613. The property was originally divided into about seventytwo shares (of £100 each), thirty-six being 'adventurers' shares,' held by Myddleton and twenty-eight others, and the remainder granted to the laing Charles I, exchanged them (1631) for an annuity of £500. The adventurers' shares have in recent times been valued at over £100,000 each (one sold for £125,500 in 1897). The Metropolitan Water Board took over this company and seven other London water companies in 1904, at a valuation of over £6,500,000. King George opened a new reservoir at Chingford in March 1913 in connection with the N. R.
New River (U.S.A.), see GREAT

Kanawha.

New Rochelle, a tn. of Westchester co., New York, U.S.A., on Long Island Sound, 18 m. N.N.E. of New York, The Knickerbocker Press is

YOR. The Kinkerooker Press is established there; druggists' scales and balances and speedometers are manufactured. Pop. (1910) 28,867.

New Romsey, see ROMNEY, New.
New Ross: 1. A tn. of Wexford and Kilkenny counties, Ireland, on the Barrow, 2 m. below the confuence of the Nore, 13 m. from Waterford. The Irish insurgents were defeated here by the Lovelits under feated here by the Loydists under Johnston and Mountjoy (1798). Pop. (1911) 5800. 2. A post vil. of Lunen-burg co., Nova Scotla, 45 m. W. of Halifax. Pop. 1300.

Newry, a scaport of Down and Armagh countles, Ireland, one of the dividuals scaled the formidable barchief ports of Ulster, on Newry ricr, and discovered those downs on Water, near Carlingford Lough, 33 m. the western slope which now form the

S.S.W. of Belfast. There are corn, flour, and spinning mills, tanneries, and breweries, with granite quarries near by. Pop. (1911) 11,956. New Shoreham, see SHOREHAM,

NEW. New Siberia Islands, Novaya Sibir, or Liakhov Islands, a group of islands in the Arctic Ocean, N. of E. Siberia, Yakntsk gov., and N.E. of the Lena Delta. They include Kotelnoi. Fadievskoi, New Siberia, Liakhov (Lyakhov), Thaddeus, and smaller islands. They are mostly uninhabited, except temporarily by hunters. Fur-bearing animals abound. Bones of the mammoth and other extinct animals have been found. Liakhoff

discovered the islands (1770). New South Shetlands, a group of islands in the Antarctic Ocean, see

SOUTH SHETLANDS.

New South Wales, a state of the Commonwealth of Australia, in the S.E. portion of the island continent. It is the oldest of the various states, and extends between let. 28° 10' and 37° 28' S., and 141° and 154° E., with an area of 310,367 sq. m. and a coastine of over 700 m. It is divided into 141 countles. Within the colony of 141 countles. Within the colony of N. S. W. the mountain range, which girdles nearly the whole island, is most continuous and clevated, and is known as the Dividing Range. The section of this mountain system on the southern boundary of the colony, called the Australian Alps, rises in Mt. Kosciusko to 6500 ft. From this the range extends northward, tho watershed being from 50 to 150 m. distant from the E. coast, and thus divides the colony into two slopes, with two distinct water-systems. The rivers on the eastern side descend with great rapidity, and in oblique tortuous courses, their channels often forming deep ravines. Many of them are navigable in their lower course for are navigable in their rower course are sea-going steamers. The principal are the Richmond, Clarence, M'Leay, Manning, Hunter, Hawkesbury, and Shoaihaven. The Hunter R., about 60 m. N. of Sydney, opens up one of the most fertile and delightful districts in the tricts in the Range, which called the Bh

abrupt and ruggen, and min of frightful chasms, long presented an im-penetrable barrier to the W., and kept the colonists shut in between it and the sea, and utterly ignorant of what lay beyond. At iast, in 1813, when the cattle were likely to perish in one of those long droughts that appear to visit this country at intervals of a dozen years, three adventurous ingreat sheep-ranges of Australia. A practicable line of road was immediately constructed by convict labour, and the tide of occupation entered on the new and limitless expanse. numerous streams that rise on the W. side of the watershed within eolony all converge and empty their waters into the sea through one chanuel within the colony of S. Australia. The southern and main branch of this great river-system is the Murray. The other great trunks of the system are the Murrumhidgee, which is navigable; the Lachlan, at times reduced to a string of ponds; and the Darling. The Macquarie, passing through the rlch district of Bathurst (q.v.), ls a large tributary of the Darling, hut it reaches it only in the rainy seasons. Numerous good harbours are formed by the estuaries of the rivers. Owing to the great extent of the colony, stretching as it does over eleven degrees of latitude, the climate is very various. In the northern districts, which are the warmest, the climate is tropical, the summer beat occasionally rising in inland districts to 120°, while on the bigh tahlelands weeks of on the bigh cancernus weeks of sovere frost are sometimes experienced. At Sydney the mean temperature of the year is about 55°. The mean beat of summer, which last here from the beginning of December to the 1st of Fehruary, is about 80° hut is much modified on the coast by the refreshing sea breeze. The annual fall of rain is about 50 in. Rain sometimes descends in continuous torrents, and causes the rivers to rise to an extraordinary height. N. S. W. is in the main an agricultural country, and much attention is devoted to stock-raising. The principal crops are wheat, maize, harley, oats, potatoes, lucerne, and tohacco, and fruit culture has greatly developed in recent years—oranges, lemons, and mandarins predominating. Enormous areas are utilised for grazing purposes, and the state is rich in mineral deposits. The chief exports are goid, silver, copper, lead, tin, coal, wool, hutter, wheat, flour, timher, meat (frozen and preserved), hides and skins, tallow, leather, and cocoanut oil, which reached the amount of £32,144,000 in 1911, while the imports were over £27,000,000. The manufactures of the state are varied and numerous. Sydney is the capital. posits. The chief exports are gold. and numerous. Sydney is the capital, but other important towns are Newcastle, Bathurst, Goulhurn, Parramatta, Broken Hill, Maitland, and Albury. Sydney is the headquarters of the squadron in Australian waters, and is the seat of a university. Education is compulsory hetween the ages of six and fourteen years. The rail-graphic communications, but also ways and tramways are mostly state maintain a large staff of writers to

A owned. N. S. W. took its origin in a owned. N. S. W. took its origin in a penal estahlishment formed by the British government in 1788 at Port Jackson, near Botany Bay (lat. 34°). The prisoners, after their period of servitude, or on heing pardoned, became settlers, and ohtained grants of land; and these 'emancipists' and their descendants, together with free emigrants, constitute the present in-habitants. Transportation to N. S. W ceased in 1840, and up to that date the total number of convicts sent thither amounted to 60,700, of whom only 8700 were women. They were assigned as hondservants to the free settlers, who were obliged to furnish them with a fixed allowance of clothing and food. In 1843 a practically elective Legislative Council was established, and twelve years later responsible government was granted. executive is in the hands of a governor, appointed by the imperial government, asponded by a cabinet.
The constitution is embodied in the
Consolidating Act of 1902. The estimated pop. in 1911 was 1,660,100.
New South Wales Government

Railway. Under this title in 1855 the mailway. Under this title in 1855 the government of New South Wales, Australia, took over the Sydney Tramway and Railway (1851, the first railway of the state) and the Hunter River Rallway (running from Newcastle to Maitland). A line was opened (1856) from Sydney to Parramatta, The present system includes the Southern line and branches (from Sydney to Albury); the Northern Sydney to Alhury); the Northern line and hranches (from Sydney to Jennings); and the Western line and branches. In 1911 the total mileage open to the public was nearly

3900 m. The gauge is 4 ft. 8\frac{1}{4} in.

Newspapers. The production of a modern N., the metbods by which it is supplied with the latest news, its 'make-up,' or arrangement of slip matter in columns, and its power as the mouthpiece of public opinion are features which find hut a feeblo parallel even so short a time as a century ago. The Press associations and agencies which provide the hulk of daily papers with foreign, political, parliamentary, legal, sporting, commercial, and social news, stock and share quotations, details of accidents, crimes colonities festivals or other crimes, calamities, festivals, or other remarkable occurrences through a network of telegraphic communications, revolutionised the N. world during the last quarter of the 19th century, and smaller publications without vast capital and resources found themselves unable to compete with their more fortunate rivals, who could not only stand the cost of tele-

shape the messages as they arrived in | we horrowed, if not the idea of a N., the newspaper offices in striking and readable form. But as in other spheres so in the news-agency world, competition soon brought the cost of messages down to a comparatively trifling amount, and as among the agencies themselves those survive which were able to reduce their expenses by co-operation and centralisa-Formerly the news agencies furnished articles, summaries events, descriptive writing, and other literary matter; but their activities are at the present day narrowly specialised into the transmission of curt, bald messages, the N. maintaining their own special staffs of rcporters to write up descriptive articles, while many of them send their own reporters into the gallery of the House of Commons and the law courts.

It is not easy to trace the origin of the N. Press, but at least it is elear that analogies in the Roman Acta Diurna or the Venetian Gazettas are very remote, and hardly less so than the old English news-letters of the 16th century. It was essentially the iuvention of printing and the more or less accidental removal of restrictions on the liberty of the Press that favoured the growth of modern N., and it is noteworthy that the public spirit and enterprise of the British people entitle them to claim the honour of originating the publication of the N. as it is known to day. Still the Acta Diurna, or daily Roman gazette, the origin of which is ascribed to Julius Cæsar, contained much of the matter to be found in a modern N., e.g. for the copious reports of football and cricket matches and horse-racing may substitute narrations gladiatorial contests, and for parliamentary news the notices of the plchiscita of the Comitla. According to Cicero, Petronius, and other writers, the Acta Diurna (called also Acta Urbana or Publica) published an account of anything worthy of note, e.g. the fall of an aerollte on the Palatine, or any other portent, naval and military appointments, the edicts of the magistrates, the successes of the imperial arms, treatics, trials, execuimperial arms, treatics, states, births, tions, the acts of the senate, births, and deaths. But they were purely authorised publications, and rather to he regarded as the official not the important voluntary

commercial speculation. They appear to have been written in manuscript that the

many of the terms in familiar use to-day in connection with N. from the Venetians, e.g. the word 'gazette,' which word is apparently derived from the name of the coin charged for reading them. Like the Acta Diurna, the Venetlan gazettes were bung up in public places. From the same writer we learn that Lord Burleigh is eredited with having published the first English N. In 1588; hut that puhlication, such as it was, was an isolated transaction in the nature of a notification to all England that the Spanish Armada was about to invade the country; and that the distinction of being the first man to print all the news of the day upon a single sheet, in a regular weekly publication, with a distinctive title, was one Nathaniel Butter, who brought out the Weekly Newes in 1622. Up to that time the only means of circulating news was the news-letters, which were the MS. productions of professional London news-writers (of whom Butter was one and 'apparently a very popular and busy one'), who collected the gossip and rumour of the city, and general items of interest of the day, and sent it out to the provincial arisand sent it out to the provincial aristocracy, or any one else who was willing to pay for the luxury. (See also Journalism.) There were, however, during the Civil War and the Commonwealth a great number of N., but their publication was only hy leave of the Star Chamber. When the Licens-ing Act (Act for licensing printing-presses) expired and the Star Chamber had been abolished, it was believed by printers that they had a legal right to publish what they chose. But the judges, who, with one or two remarkable exceptions, were at all times during the Stuart period subtames auring the Stuart period subservient to royal wishes, decided that by the common law of Englaud no man, not authorised by the crown, had any right to puhlish political news, though he might print at his own risk a history, a sermon, or a poem without licence. But it was political intelligence above all that the reading public wanted and that the reading public wanted, and that forms indeed the staple dict of N. at the present day. But it was essential to the interests of an autocratic ministry of 'placemen' that the public should be kept in ignorance of political matters, and bence ensued for a century an historic struggle hes a tween parliament and the people over. the freedom of the Press. There was no doubt some constitutional warrant and hung up in some conspicuous for governmental control, for ever public place. Charles Pehody, in his since the Reformation the governmental control, for ever public place. the printing and publication is in order to prevent the

ity. Up to the Long Parliament the duty of censoring publications was performed by the Archbishop of Canterbury or his subordinates, and offenders were prosecuted in the Star Chamber. The Press became temporarily free on the abolition of the Star Chamber; but the Long Parlia-ment, becoming frightened by the mass of pamphlets which were soon broadcast over the country, again subjected books and other reading matter to licensing regulations; and at the Restoration a most retrogressive step was taken in the passing of the tually vested

entire control on-renewal of ntomatic exway for the

freedom of the Press.

Among the earliest of English N. after the Restoration were the Protestant Intelligence, the Current Intelligence, the Domestic Intelligence, the True News, and the London Mercury. But none of them printed debates in parliament, and none exceeded in size a single small leaf, or was published oftener than twice a week. According to Macaulay (History of England), the quantity of matter which any one of these N. contained in a year was not more than is often found in two numbers of the *Times* of hls day. Towards tho end of Charles In any. Towards to end of charles II.'s reign that monarch, backed by the decision of his judges, allowed no other paper to be published but the London Gazette, a bi-weekly production which contained nothing but what the court deemed suitable to its purposes. As indicated above, it was not till some time after the Revolution that the Press really became in tion that the Press really became in any modero sense a free institution, and the first daily N., the Daily Courant, was not published till the accession of Queen Anne in 1702. (For the character of this and other contemporary periodicals of this the classic age of English literature, see Lournettey). Even after the shelp. JOURNALISM.) Even after the abolition of the licenser of books (including N.), there was another obstacle to the free publication of N. in the shape of the N. tax, the Bill for which was passed as the Stamp Act in 1712. It was the old bugbear of sedition which prompted this device for killing the N., a device which was eminently successful, for not one penny paper survived, and even Addison's Spectator collapsed, while Steele incurred the wrath of the Attorney-General for articles in the Englishman and the Crisis, which were held to be aspersions upon the character of Queen

circulation of seditions matter or of the administration.' But the spirit matter contrary to religion or moral- of freedom was too much in the air ty. Up to the Long Parliament the lafter the final overthrow of the duty of censoring publications was Stuarts to allow of anything like a final suppression, and the printers soon evolved means of evading the Stamp Act; and in this they were strenuously aided and aletted by the leaders of the Opposition, to whose often scurrilous and venomous attacks on their political rivals we owe the beginning of the publication of proceedings in parliament (see further on this, JOURNALISM). By the Act of 1840 the publication of any reports, papers, votes, or proceedings of either House of Parliament, by the order or under the authority of that House, is absolutely protected, and also the republication in full.

But modern parliamentary reporting is vastly different from what it was in the days of Cave's Gentleman's Magazine or Henry Fielding's True Patriot. These latter papers published their scanty hearsay reports rather by the connivance of sympathisers, and it was probably seldom that they ever gave anything approaching even a short verbatim report of a speech at or even about the time of its utter-With the final removal of all ance. restrictions other than the ordinary iaw of libel, came the development of shorthand reporting. Previous to that, reports of debates had gradually grown fuller, and naturally men with long memorics were an acquisition to a N. staff, for no stranger dared be seen taking a note. The old Morning Chronicle, which for long was the leading English N., possessed an actonishing mental note-taker in the person of one ' Memory ' Woodfall. It is recorded that this man frequently accomplished the feat of writing reports extending to many columns, faultless in the matter of accuracy, without ever having put penell to paper while the speech was in course of delivery. About this time the London Magazine began to publish what at that time were elaborated reports. But in all cases the names of the speakers were suppressed with the exception of the first and last letters, much in the same way as cartoonists used to do jo comic journals of the eighties. In 1738 parliament seems to have taken steps to stop the practice of reporting, for the debates were thereafter published as if they had taken place in a fictitious assembly. In 1745 the printers of the London Magazine were placed in custody for reporting the trial of Lord before his poers. Lovat before his peers, and in 1764 the House of Lords fined the pro-prietors of the London Evening Post £100 for mentioning the name of one Anne, and assaults upon the conduct of the speakers. But after that public

sympathy for reporting became too, stories, or follow up a message from strong for parliamentary privilege, a news-agency. In one office the sole with the result that reporting gradually became recognised as lawful. in glancing through a pile of papers Parliamentary reporting laid the and periodicals of all kinds for proseeds of the future prosperity of the mising matter, which, when selected, Morning Chronicle; but it was not is cut out and pigeon-holed for future until the midde of the 18th century reference, e.g. in perusing a Penang that its then editor,

to an end.

The atmosphere and sounds of a typical modern N. office are the re-verse of congenial to quiet scholarly However large the building, many of the rooms are filled with the crunch of the guillotine cutting the paper and the monotonous thudding and vibration of the linotype printlng-machines. In most departments there is a constant ringing of tele-phone bells and a whirring of venfans. while a percanial stream of messenger boys bring stream of messenger boys bring filmsies from the news agencies or messages from superior officials to their subordinates; and again, towards the end of any afternoon the newsboys, at the distribution of the so-called 6.30 editions of the even ing papers, fill the yards below with a shrill tumultuous noise which it is no hyperbole to compare with the sounds issuing from a menagerie. It is impossible without a certain degree of usage to accustom oneself to these various distracting noises, and a reporter endeavouring to write up potter endeavouring to impatient sub-editor may well 'kill 'his own 'story 'through inability to concentrate his faculties on its salient points. It is probable that the 'space' reporters and the sub-editors have the salaried) depend for their carnings, present public moment, nor likely to

e saw an announcement

mitiated the system of relays of reporters. By water out his reporter has time to write out his notes in full, while his colleagues continue the note-taking, with the result time the note-taking, with the result that a complete report of any debate is in readiness for the printer practically as soon as the colleagues to an end. editor, having made up his list, assigns a staff reporter to one or more stories,' and sends them out in quest A good reporter will not return until he has found out all that is possible, though, as may be expected, a considerable number of the stories, turn out failures from the point of view of the N. (For a reference to some smart journalistic coups, or 'scoops,' by reporters, see JOURNALISM.) The sub-editor's functions consist principally in cutting the reporters' copy down to the limits prescribed by considerations of space. in prefixing appropriate headings and sub-headings, and in indicating to the compositors the relative sizes of the type to be used in the headings, sub-headings, and body of the 'story.' A narrative of an event of very great public interest indeed, as, e.g., the salient parts of a Budget speech, or an account of a battle, would be in 'leaded' type, while news of relatively small interest would be in 'minims.' A chief sub-oditor's duties 'minims.' A chief sub-editor's duties are no light task. An item of news may be flashed over the wires or through the telephone just as the paper is going to press, and he must make up his mind whether it would not be advisable to hold the paper back for a time pending further inmost unenviable duties to fulfil. formation, or whother he may safely 'Space' reporters (as distinct from consign the intelligence to oblivion as a mere hoax or an unfounded rumour on the amount of their caprings, a mere now of an unfounced that on on the amount of their copy that from a well-intentioned but misappears in the paper and if the 'story' informed foreign or special correson which has 'news-end' to it, or in this connection was accomplished by other words, is neither of much the Daily Mail on the lamentable present public moment, nor likely to present public moment, nor likely to occasion of the sinking of the Jaming or the produce really fresh intelligence, it is Most papers went to press and came out in the morning with hopeful news, sub-editor, i.e. it will be put in a basket against a problematical use in editions when the terrible news of the a future edition, though in reality it generally dies a natural death. Most progression of the ship with 2500 per generally dies a natural death. Most sons came to hand; but the submorning news editors follow the same creatist at 30 of the Daily Mail were gractice. A list of the main events is conscious of the leasing of the Jaming of drawn up by a news editor and his generally unsatisfactory nature of the assistant, who sean the various mornimessages, and kept the paper backing papers of the day for likely from the printing room till 6 A.M.,

with the result that their morning in public favour, while one evening edition sold to the number of some-paper at least owes its continued

thing like 2,000,000 copies.

Reports of lawsuits, police court charges, and criminal prosecutions at the sessions and the Central Criminal Court, are supplied largely by newsagency reporters. The Times employs barristors to make their reports, and the Daily Telegraph also employs a special staff of law reporters. At the present day there are three newsagencies that undertake law reporting, and as may be inferred from the streuuous competition, the rate of pay is not high, the weekly salary being about £2 for the forty weeks of tho iaw terms, while a lucky reporter can ahout double his carnings by commissions on reports accopted by N. Reports of cases destined to appear in the London evening papers are written up in the law courts as soon as the reporter catches the drift of the cause of action, sent down to the suh-editorial room in the law courts, and either taken hy messeuger or transmitted over the tapemachine to the central offices of the agoney, the editorial department of which rotalis it to the N. Reports of cases regarded by the reporter as likely to be of interest to provincial N. are written as 'flimsies' (very thin paper which with interleaved carbon slips makes the copy to be repeated to any number for despatch to dif-ferent provincial papers interested) and sent hy post, or telegraphed, or telephoned. Short results of trials, as of cricket matches, horse races, or any other sporting event, or of elections, and of other matters of great public interest, are generally to be found in the 'stop-press' or blank space of an evening paper (in N. circles this is called the 'fudge'), this device being adopted to avoid re-setting type. (For the outstanding features of novelty in modern journalism, and some remarks on French and American N., see JOURNALISM; for the histories of individual N., sec DAILY CHRONICLE, DAILY MAIL, etc., etc.; and for the history and bearing of advertisements on N., see Advertisements.)

The rise and wane of particular N. is not easy to account for, and N. proprietors, like theatre managers, have ample cause to moralise over the curious fickleness of public taste. Bad management, over-capitalisation, an unpopular political cause, may each and all have something to do with uon-success. Experience shows that genuine independence in politics and a consistently literary or clegant flavour 'about a N. are both fatal to

paper at least owes its continued success partly to polities but mainly to the prominence given to sporting news. Arrangement of news items and mothod in the general distribution of uews, articles, causerie, 'lobby' rumour, or political notes, and so on, have no doubt some hearing on success; but they are matters which in theruselves have no effect in the absence of an already substantial reputation. On the whole the English N. press is not undeserving of the encomiums heaped upon it, though thore should be discrimination in the apportionment of praise, for the in-dividual papers differ fundamentally in methods of policy and appearance. Sometimes complaint is made of the tyranny of the Press over public opinion, but it is at least doubtful whether in all cases the Press influences public opinion or vice versa. If undue prominence is given to murders, divorce petitions, breach promise cases, and the generally sensational, whether really or only apparently of 'human interest,' the public is mainly to blame. A universal desire for the N, to use their power principally for educativo purpower principally for educative purposes would he quickly reflected in the N. themselves. The undoubtedly greater degree of sobriety of many modern N. us compared with the universal scurrility of tone of N. in the days of 'Junius,' or oven later, leads one to infer that such a desire is really if slowly developing. It is part of a larger question whether the mass of news daily given to the public is in news daily given to the public is in Itself, and quite apart from manner of presentation, of any spiritual value. Even Lord Salishury, occupying dur-ing the Boer War a position the ap-

the light of N., to deprecate the reading of N. generally. But his was an academie utterance, and most men are quidnuues at heart, perpetually demanding 'of all the thousand demanding of all the thousand things of the hour their stupefying power, and the general affairs of

mankind hardly permit one to see from the serene skies above 'how houndless might his soul'sbornzon be.'
Newstead: 1. A vil. of Roxburghshire, Sectland, on the Tweed, I m. E. of Melrose. Remains of a Roman camp were excavated here in 1910. Armonr and weapons were also found, reign of Augustus to that of M.

A par, and vil. in N. 'flavour 'about a N. are both fatal to Aurelius. 2. A par. and vil. in oirculation. The cheaper N. rely either Nottinghamshire, England, 9 m. N. npon a trenchant political campaign of Nottingham, near the outskirts or sbeer sensationalism to keep them of Sherwood Forest. Its famous ahhey was founded by Henry II. in An introduction to the N.T. deals in the latter half of the 12th century, a general manner with all such quesand it was granted by Henry VIII, to the Byron family, who held it until 1818, when the last Lord Byron sold it. It has since heen restored at a cost of about £100,000. See W. Irving's Abbotsford and Newstead, 1835.

Newt, Eft, Asker, Mankeeper, Darkhiker (Triton), a genus of tailed aniphibians of the order Salamandrinæ. They are widely distributed, and three Species occur ia Britain, viz. the Commou or Spotted N. (T. vulgaris), the Great or Crested N. (T. cristulus), and the rare Webbed N. (T. palmalus). Of them, the Crested N. is the most aquatic. Its head is flat and the upper lip overhangs the lower one. The upper parts of the thick round body are hlackish brown with darker brown spots. The under parts are bright reddish orange, with round black The sides are dotted with and in the spring all the spots. white, colours of the rough skin brightea and the notched erest comes into prominence. The male reaches a length of 5 or 6 ln., while the Common N. rarely exceeds half that length and the skin is smooth, though its colouring re-sembles the other. The metamor-phosis of the N. is very latercisting, and can be easily observed in a well-managed aquarium. The eggs are laid among pond weeds, and each pro-tected by heing rolled up in a leaf. The tadpoles which latch from them may be distinguished from those of the frog by their more feathery gills. The anterior limbs appear first, and the hind legs are visible within a

t that time the ito use and the ody of the N.

blood in the gills to be even more easily watched than the circulation in the web of a frog's foot. At the same time the development of the internal organs can he observed with greater case prohably than in anyother vertebrate. In a well-stocked aquarium, N. tad-poles are able to provide themselves with sufficient food; but as the meta-morphosis proceeds and the diet hecomes more carnivorous, difficulty may he experienced in providing a sufficient number of small worms, insect larve, etc., for their voraclous appetites. If handled in the spring, Ns. are capable of causing slight un-pleasantness, but otherwise they are absolutely harmless. The fact that they leave the water and hunt for food at night-time makes them of considerable cconomie value as insect-destroyers.

tions affecting each book, as its age, author, object and aim, credibility, characteristics, integrity, contents.' Thus, at least, it is defined by Davidson, while a more modern critic, Professor Jülieher defines the work of an introduction to the N.T. as 'that branch of the science of literary history whose subject is the New Testament.' It forms a considerable section of hiblical criticism, and as such must be considered in regard to the whole (see Bible). But since many critics have devoted particular attention to the criticism of the N.T. as a whole as well as ia its component parts, it is well to give a short sketch of the history of this department of study. The fixing of the canon of the N.T. was the work of some centuries, and hefore this took place there was much research of the kiad that would now come under the head of N.T. introduction. Certain books were held as canonical in some places and by some fathers; in other places and hy other fathers they were ignored. In the discussions which ensued as to the canonicity of such hooks, judgment was almost invariably based on historical grounds. Were those books which olaimed to be written by apostles really apostolic? Similar defence of the canonical books was also needed against the attacks of heretleal seets. Thus we find many statements on points relating to N.T. introduction in such writers as Irenœus, Tertullian, and especially Origen. A large number of the problems which confront the critics of to-day were not unknown to the fathers of the early Church. In the middle ages these problems were for-gotten and an uncritical tradition was received without question. The Bible was brought into far greater prominence at the Reformation, and it was inevitable that the new learning of the time should also render more scientific the study of the sacred books. The early reformers, Erasmus, Luther, and Calvin, all expressed opinions on the authorship and value of certain of the N.T. books differing from the traditional views; but it is to a Catholie that we owe the true foundation of the study of biblical Richard Simoa, published his to du New Tes-

tament, followed in the next year by an Histoire critique des Versions du New Testament. He deals with the N.T. in the light of the various theories advanced concerning it, with onsiderable conomic value as in-the object of vindicating the tradi-tional view. Many critical introduc-New Testament, Introduction to the.

marked by the names of Michaelis and Scmler. The former published in 1750 bis Einleitung in die göttlichen Schriften des Neuen Bundes, which was much improved in the fourth edition (1788). He shows much hreadth of view, dealing with the questions of inspiration, authenticity, and most of the subjects now dealt with under this head. Semler wrote no definite Einleilung. His contribution to N.T. criticism lies in his continual insistence on the distinction between the temporal and universal elements in the N.T. From the time of Michaelis and Semler the study of N.T. introduction has been carried on very vigorously by German theologians and scholars. Only the most import-ant can be named. J. G. Eichhorn in 1804-14 published the first three volumes of his Einleitung in das New Testament, and the two remaining ones appeared in 1827. It was a brilliant work, hut few of its results have been finally accepted. In every way it is of less importance than the work of W. M. L. de Wette, whose Lehrbuch der historisch-kritischen. Einbuch der Assorisch-kriuschen Ein-leilung in die Kanonischen Bücher des New Testament appeared in 1826. The first edition of this work was characterised by a very anti-tra-ditional attitude, and is rather negative than positive. This, however, is changed to some extent in later editions. A work equally famous for its full hut concise exposition is K. A. Credner's Einleitung in das New Testament, 1836. But, like Eielhorn, Credner shows too much haste in the formation of theories. In 1842 appeared Reuss's Geschichte der heiligen Schr. New Testament (last ed., 1887), a work still of the greatest value in the investigation of the probler Most of biblical criticism. Most of writers, especially De Wette, oc

a position more or less opposed to has appointed consul at Rome, but in that of the Tül-ingen school, whose 1861 was recalled as keeper of Greek head was F. C. von Baur. He publed and Roman antiquities at the British lished a number of works on the N.T. Museum. and early Church history, in which he definitely assailed the historicity of an American painter, born at Halifax, the canonical books. These he con-Nova Scotia. He first exhibited at the or less polemical treatises embodying the tendencies of the opportunity of Quixote in these was the Judaistic headed by the tain Maches Peter; the other, headed by Paul and Strings were sanio, 1831.

Natural Strings of the opportunity of the carbon for t the tendencies of the opposition

years that followed—in England, attacks on the Tühingen position France, and Germany; hut the next came from a former disciple of Baur, epoch in the study of this subject is A. Ritschl, in the second edition A. Ritschl, in the second edition (1857) of his Enstehung d. altkatholischen Kirche. Reference must also be made in modern times to the intro-ductions of Holtzmann (3rd ed. 1892), Weiss (Eng. translation, 1889), David-

Weiss (Eng. translation, 1889), Davidson (1848-51), Lahn (1897-99), and Jülicher (1894). See also Bieler.

Newton: 1. A tn. of Scotland in Mid-Lanarkshire, 5 m. N.W. of Hamilton. Pop. (1911) 2200. 2. It is also the name of a suburb of Auckland, N. Island, New Zealand. Pop. 3500. 3. A city of Massachusetts, U.S.A., in Middlesex co., on the Charles R., 10 m. W. of Boston, and a residential suburb of that city. There are foundries and machine factories, and manufs. of electrical apparatus. Pop. (1910) 39,806. 4. A city of Kansas, U.S.A., and the cap. of Harvey co., 30 m. N. of Wichita. There is a Mennonite settlement here. The trade is chiefly agricultural. Pop. The trade is chiefly agricultural. Pop. (1910) 7862.

Newton, Alfred (1829-1907), an

world. He published Zoology of Ancient Europe, 1862; Ootheca Wol-leyana, 1864; Zoology, 1872; and a Dictionary of Birds, 1893-96. Newton, Sir Charles Thomas (1816-

94), an English archeologist, born at Bredwardine in Herefordshire. In 1840 he entered the British Museum as assistant in the Antiquities Deas assistant in the Antiquines Department, then undivided. In 1852 he became vice-consul at Mitylene, and in 1853-54 consul at Rhodes. During this time, aided by funds supplied by Lord Stratford de Redcliffe, he discovered an important series of inscriptions at the island of

f the mauso-In 1860 he

sidered were to he regarded as more Royal Academy in 1818, becoming an associate in

in 1832. H. Quixote in

relation to Newton, Sir Isaac (1642-1727), born this struggle. The main thesis of the at Woolsthorpe, Lincolnshire, post-Tübingen School is now generally humous son of a farmer, I. Newton, humous son of a farmer, I. Newton, humous son of a farmer, I. Newton, sie the school of the second s Newton, Sir Isaac (1642-1727), born rejected, and its conclusions distand Hannah Ayscough. Educated at credited. One of the most convincing the Grammar School, Grantham, and

to controversics extremely wearisome to N. Previous to this, from 1665-67, he was engaged largely in mathematics, having studied Descartes' geometry, and invented the binomial theorem, the method of tangents, and the fluxional calculus, his paper Analysis per Equationes Numero Analysis per Equations Namero Terminorum Infinitas leading to his professorship. In 1666 his thoughts were directed by the falling of an apple, according to Voltaire, to universal gravitation. From Kepler's third law he deduced the law of inverse squares and applied it to the motions of the moon; but did not



SIR ISAAC NEWTON

complete his verification till he had Picard's new value (69.1) for the length of a degree of latitude, which was found in 1672. In 1684 he wrote De Molu, which was presented to the Royal Society. This was the germ of his great work, and with additions formed the first book of his *Philoso-*Naturalis Principia Mathephixmatica, written 1685-86, during willch tlme he was in constant correspondence with the astronomer royal, Flamsteed, chlefly on the subject of measurements of planetary orbits. The whole work was published in 1687. In 1689 N. was cleeted to represent his university in the Convention Parliament. During 1692-93 ho passed through a period of serious illnoss, with loss of appetite and marked insomnia. Ho was at last, ln 1694, largely due to the efforts of John

Trinity College, Cambridge; ho was Locke, appointed by Lord Montague, elected F.R.S. in Jan. 1672. This led warden of the Mint, and three years warden of the Mint, and three years later master. The year 1701 saw him again in parliament, but he was defeated at the polls in 1705. He became president of the Royal Society in 1703, and was annually re-elected for the remainder of his life. He was knighted by Queen Anne in 1705. Hls Optics was published in 1704. A very prolonged controversy took place as to priority of claim to the inventiou of the new calculus between N. and Leibnitz, and thore were disputes. In 1714 N. gave ovidence before a committee of the House of Commons on the question of finding longitude at He was interested in theological studies and the ancient proplictics, and some of his writings were published after his death. Amongst his great friends must be reckoned Halley. He was also welcomed at the court of George I. He died at Kensington, and was buried in Westminster Abbey. Among English scientists he stands Among English scientists no stands easily foremost, and without doubt is the greatest of the world's natural philosophers. See Dr. Horsley, Isaaci Neutoni Opera quæ exstant Omnia, 1779; Sir D. Brewster, Memoirs of the Life, Writings, and Discoveries of Sir Isaac Neuton, 1855; Gray's Bibliography, 1888; A. do Morgan, Life, 1885 1885.

Newton, Thomas (1704-82), Bishop of Bristol, born at Liehfield. He was ordained in 1730. After holding varlous minor appointments he became bishop of Bristoi in 1761. Ho edited Milton's Paradise Lost, and published

Disserbotions on the Prophecies.
Newton, Thomas Wodehouse Legh,
second Baron (b. 1857), eldest son
of the first Baron N., created 1892;
was educated at Eton and Christ Church, Oxford. Ho entered the diplomatic service from 1880-86, and was attached to the embassy in Paris. From 1886-99 he was member of parllament for Newton, Laucashire, on the Conservative side. He is a J.P. and D.L. for Cheshire, and an honorary floutenant-colonel in the Lancashire Hussars, Imperial Yco-manry. He succeeded to the title in 1898.

Newton, John (1725-1807), an English divino, and friend of Cowper, born in London. First a sallor and slave-trador; 1755-60, thoe-survoyor at Liverpool; 1758, Archbishop of York refused him ordination; 1764, ordinad by Bishop of Yorker order refused him ordination; 1764, ordained by Bishop of London; curate of Oiney till 1780, when he became rector of St. Mary Woolnoth, Lombard Street, London. With Cowper, published Oiney Hymns in 1779. Lires, contemporary, by Bull and by Callis (1908).
Newton Abbot agraphent medical

Newton Abbot, a scaport and market

town of Devonshire, England, on the estuary of the Teign, 20 m. S.W. of Exeter. The Great Western Rail-way has large engine works here, and there is some trade in shipping. Pipeclay and fine clima clay are obtained in the neighbourhood. William of Orange was proclaimed King of England here, at the Market Cross, in 1688. Pop. (1911) 13,712.

Newton Grange, a vil. N.E. of Edinburgh, Scotland, 2 m. S. of Dalkelth, with coal mines, brick and tile works,

paper-mills, ctc. Pop. (1911) 1156. Newton Heath, a tn. of Lancashiro, England, 14 m. N. of Manchester, on the Medlock. There are cotton-mills, and dye, hleach, and chemical works. It is a suhurh of Manchester.

Newton-in-Makerfield, or Newtonle-Willows, an urhan dist. and th. of Laucashire, England, 15 m. E. of Liverpool. The Liverpool farm re-formatory sohool is here, with a farm and market gardens. There are iron foundries, glass factories, sugar refineries, and printing and stationery works, paper mills, etc. Coal is mined in the neighbourhood. Pop. (1911)

18.462.

Newton's Rings. Nowton took two lenses of very slight curvature, so arranged as to enclose, when pressed together, a film of air, thinnest near the centre and thickening gradually outwards. On pressing, a number of concentric coloured rings appeared, varying in number and arrangement, but all exhibiting colours of the spectrum; the centre of the rings when the glasses were in contact was black. With white light the number of rings is seven, and the colours are arranged from violet to red outwards. When the light is transmitted instead of reflected, the colours are complementary and the black spot be-comes white. The convex surface being pressed on the plane surface of the lower lens encloses a film varying from 557655 to 73866 in. in thickness outwards, the thickness varying as the square of the distance from the centre. The light is reflected from each surface and arrives at the eye, having traversed paths differing minutely in length. They are thus minutely in length. They are thus seen simultaneously in the same phase or opposite the phase or opposite phases, thus producing interference, destruction, or reinforecinent. The different colours produce their effects at different distances from the centre, and by incasurement the actual wave length may be determined.

Newton Stewart, a market tn. of Scotland, in the cos. of Kirkeudbright and Wigtown, on the R. Crec, 61 m. N.N.W. of Wigtown. Cattle markets and horse fairs are held. Pop. (1911)

2061.

Newton-upon-Avr. a suburb of Avr. Scotland.

Newtown: 1. A manufacturing tn. of N. Wales, in the co. of Montgomery, 8 m. S.W. of the town of that name, on the r. b. of the Severn, and on the Montgomery Canal, which connects it with the inland navigation of the It is the centre of the country. flannel manufactures of the county. New South Wales, Australia, in Cumberland, 3½ m. from Sydney, and principally a residential suburb of that city. Pop. 23,000. 3. A suburb of Hobart, Tasmania. Pop. 3000. Newtownards, a tn. of co. Down.

Ircland, ne Er Lough.

hams, and factured. I the ruins o

(1911) 9000. Newtown Hamilton, a par. and market tn. of co. Armagh, Ireland, 11 m. W. of Newry. Pop. (1911) 3000.

Newtown Stewart, a market tn. in co. Tyrone, Ireland, on the Mourne, 24 m. S. of Londonderry. Pop. (1911)

1100.

New Ulm, a city of Minnesota, U.S.A., and the co. tn. of Brown co.,

U.S.A., and the co. tn. of Brown co., on the r. h. of the Minnesota R., 75 m. S.W. by W. of Minneapolis. It was founded in 1854 and destroyed by Indians in 1862; it has heen well re-huilt since then. A trade in live stock is carried on. Pop. (1910) 5648, New Urgenj, see URGENJ.

New Westminster, a tn. of British Columbia, Canada, former cap. of the prov., on the r. h. of the Fraser R., here crossed by a fine bridge. It is a terminus of the C.P.R.; an electricaliway connects it with Vancouver, 10 m. E.S.E. A fire occurred in 1898, when a large part of the city was destroyed. Pop. (1913, est.) 20,000. destroyed. Pop. (1913, est.) 20,000.

New Whatcom, a former city of Washington, U.S.A., now part of Bellingham.

New Year's Day has heen cele-brated in all parts of the world, and. brated in all parts of the world, and, from remote antiquity with special festivities. The date of the commencement of the new year has, however, varied considerably. The ancient Egyptians and Perslans commenced it with the autumnat solstice. The Jews (ecclesiastical) and the Rahylonians made it herin in the Babylonians made it begin in March. During the middle ages-Christian countries almost invariably began the new year on March 25. According to the Julian calendar, the new year began on Jan. 1., and the Romans observed this day as a general holiday. Visits were paid

and presents exchanged, the custom

of giving presents being popularly derived from the time of the legend-

ary King Tatius. The gifts were known as strenæ (ef. the name for N. Y. D. in France, le jour d'étrennes), and so great were the imperial strenæ that they ultimately became a subject of legislation. The carry Christians were not expected to take part in cither the new year's revels or the Saturnalia of December, and many of the fathers order N.Y. D. to be kept as a fast. But the need for this vanished, and even in England the custom of giving New Year's gifts continued down to the time of Charles II. It has now given way to the presentation of Christmas presents. According to the Gregorian calendar, N. Y. D. arrives twelve days carlier than in the Julian calendar. Hence, in Russia and other countries which keep the old style, N. Y. D. is celebrated on Jan. 13 by our calendar. New Year's Islands, islands of S.

America, situated in Tierra del Fuego, Argentina, at the extreme S. of the continent. There is a meteoro-

iogical station here.

New York Bay, an opening at the mouth of the Hudson R., upon which New York City stands. It consists of New York Upper Bay, formed by the North and East rivers, and New York Lower Bay, an arm of the Atlantic.

York Central Railway was startec dates :

one of and he main . .

«Chicago, 1 ranch dines and f the E. states Now York terminus is a grand building, and a perfect network of lines run into it. The great roof is mostly of

glass. It New York. It is one of the sights of rk. The dividends are very large, and for years past there have

been large surplus profits.

New York City proper is the Island of Manhattan; but greater New York includes the boroughs of Bronx, Brooklyn, Queens, and Richmond, and part of Chester City. New York is the second largest city in the World, and has more Germans living in it than in any city in Germany save Berlin, and more Irish than in Dublin. Every fourth person in New York is a Jew. As regards population, 'emales ls also

which is always a feature of large ports. Many Chinamen are engaged in laundry work. There are a great many Italians employed as labourers and bricklayers. The negro population is comparatively small. The naval shipbuilding yards are on the Jews are chiefly Polish Jews. Swedes and Norwegians have each a strong the rivers are of immense size. The

colony in New York, and are prosperous, quiet, working citizens. Owing to the size of Manhattan Is., (12 m. in length and very narrow), sky-scrapers have been erected, the famous Woolworth Building, the tallest in the world, being 750 ft. hlgh. The Singer Co.'s building is 612 ft. high; Puhtzer building, 310 ft.: and Flat-iron, 290 ft. The Dexel building has 23 stories, and Park Row 32. New York is the great mart and exchange of the U.S.A. The Stock Exchange is in Wall Street, a

across which run the avenues. The Fourth and Fifth Avenues are mostly residential, and here are the palatial homes of the business kings. Principal shopping district from Seventeenth to Thirty-fourth Streets. Bowery, ex-tending N. of Chatham Square, is the Jewish quarter, and the poorest part of the city. Two lines of railways York and Newhaven, and Long Is, and New York, connecting with malnland by means of long tunnels. Other big lines are New York Central, Eric and Lehigh Valley, and the Penn-ylvania railwsys. The Elevated railways. The Elevatea Railway is a feature of the city, and there is now a fine underground railway along the whole of Manhattan Is. New York is the largest port in America, 3 per cent. of imports of United States coming by way of this city. The exports are imports and therease and therease are inof this city. The exports as mense, and increase every mense, and increase every year. New York Harbour is formed by the North and East rivers, mouths of the Hudson. There are two bays, the upper and lower, divided by the Narrows, commonly called Hell's Marrows, commonly called Hell's Mouth. Bounded on the S.E. by Raritan Buy, N.E. by Brooklyn and Long Is. Sound. The promontory of Sandy Hook with lighthouse is the first land sighted by Euronean travel-

electricity: It is said to be the largest statue in the world. The water communication of the Hudson R. and the Eric Canal is of the utmost importance, for most of the wheat sent from Chicago market is thus shipped through to Europe. The principal through to Europe. The principal Transatlantic lines of steamships are the Cunard, the White Star, the N. German Lloyd, and the Hamburg-American. Many of the piers are on New Jersey side at Hoboken; others on the North R. The United States

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principal industries are the making of ready-made clothing, paper-making, printing, leather working, tobacco, and sugar-refining. New York City leads in literature in the United States, owing to the many large publishing houses which have been established. The monthly magazines are exceptionally good. New York is noted also for its daily papers, over one-seventh of which are printed in foreign languages; two are in Yiddish. There are two universities, Columbia and New York City, the undergraduate department of which is on Washingtou Heights. From the Campus a grand view of the Hudson is obstained. obtained. The Hall of Fame, which forms part of the university huildings, opens on a colonnado of 500 ft. long. The People's Institute, primary and adult evening school, uses Cooper's Hall for debates and meetings. There are good primary and secondary schools, and many excellent private sohools and seminaries. The New York Public Library, established by consolidation of the Astor, Lenox, and Tilden foundations, was opened in 1911. There are seats for 768 readers; there is capacity for about 2,570,000 volumes. The Bellevue Hospital Medical School is the largest medical school in America. There are 550 school in America. There are 550 churches: Trinity, at the head of Wall Street, Grace Church, the Church of the Transfiguration, known as the 'little church round the corner' (Episcopalian), St. Patrick's Cathedral (Roman Catholic), Madison Square Church, Byzantine with golden dome Church, Byzantine with gotter unine (Presbyterian), and the fine Jewish synagogue are all notable. In 1624 the Dutch Trading Company founded New York, but in 1664 it was taken by the English. The Chamber of Commerce received its charter by Act of Parliament in 1768. Washington was inaugurated as president of U.S.A. in Federal Hall, New York, and the city was capital of the state till 1797. The New York Central Park is 840 acros in extent, and has many magnificent drives and walks. At the main entrance is a fine statue of Columbus. The Metropolitan Art Musoum faces the E. side. Morningside Park is smaller, but very beautiful, and Riverside Drive, overlooking the Hudson, is a grand thoroughfare. Prospect Park, ou the Brooklyn side, is of botanic interest. There are two Brooklyn bridges - the suspension bridge, which created quite a furore when first built, and the new Brooklyn bridge, a triumph of engineering skill. The rate of living is high, and rent disproportionately heavy. Large boarding-house and tenement buildings, palace-like hotels and apart-ment houses, are a feature of the city,

ground being too valuable for ordinary dwellings. There are fine municipal Pop. (1910): Manhattan, buildings. 2,331,542; Brooklyn, 1,634,351; Bronx, 430,980; Queens, 284,041; Richmond, 85,969; total, 4,766,883. See Tammany Hall.

New York Herald, founded in 1835 by James Gordon Bennett, who after an editorship of many years was suc-seeded by his son who bore the same name, and who greatly increased his father's initial success. The paper has always been immensely popular.

It has a circulation of 130,000. New York Journal, founded in 1733 as a weekly: became a daily in 1788. Has largest circulation of any evening paper in New York, averago of 700,000 copies daily. It is the property of William Hearst (b. 1863), son of William Hearst, the great Guardine and millionaire railway financier and millionaire who San Francisco, is known for his successful newspaper enterprises. He is the representative of popular democratic journalism. So sensational were his papers that they gained the nickname of the

'Yellow Press,'
Nsw York Stats, the most influential of the U.S.A., called 'the Empire State,' one of the original thirteen states; three times the size of England; bounded on N.W. by Lake Ontario, N. hy the prov. of Quebec, E. by Vermont, Massachuseits, Con-necticut, S. by New Jersey, Penn-sylvania, Area 47,645 bq. m. The beautifully wooded Adirondack Mis. are in the N., the Catskills in the E., Ohawanglak Range in the S. Lake Senera and Lake Cayuga are the largest of the Finger Lakes, a belt of lakes in Western New York, and both are about 40 m. in length. Lake Geneva is one of the pretiest. The beautiful George and Champlain lakes lie E. of the state. The famous Hudson R., with Mohawk tributary, flows eastward through this state alone, whilst the Delaware and Susquehanna rivers drain the central part. Erie Canal, opened in 1825, connects the Hudson with the Great Lakes. The largest cities are New York (4,766,883), Buffalo (423,715), Rochester (218,149), Syracuse (137,249), Albany (the capital, 100,253); Troy (76,813), Utica (74,419), Schenectady (72,826), Elmira (37,176). The state

cation is compulsory between eight and sixteen, and over 42,000 teachers are employed in the public schools, most of them being women. Univer-sities: Colombia, New York City, Cornell (where state scholarships can subject to extremes of hot and cold;

the air is dry and invigorating.

New York stato was discovered
by Verrazano in 1524, and in 1609 Samuel de Champlain entered from Canada at the same time as Henry Hudson, sailing under the Dutch flag, and reached New Netherland, the name first given to New York City. After much desultory fighting, Peter Minuit, in 1626, bought Manhattan Is. from Indians on behalf of the West India Company. In Colonel Nichols took possession in Duke of York's name. In the War of Independence the decisive battle of Golden Hill was fought in 1770, soon after the battle of Lexington, Massachusetts. A few years later, 1776, the Committee of One Huudred drew up the New York State Constitution of Figure 1865. tution at Kingston. During the Civil War between N. and S., party politics ran high, there being a strong antislavery feeling. Since 1860 economic development has continued with uninterrupted smoothness. 1882 the Labour party secured the passing of a Bill limiting hours of work for women and children. The work for women and children. The state is one of the most populous of the U.S.A., with many large flourishing cities. Pop. (1910) 9,113,614.

New York Sun. This paper was started by a journeyman printer agand. Regioning Day in the rearrents.

named Bonjamin Day in the year 1833. He wrote, edited, and printed the paper by himself for some years. It was later acquired by Charles Anderson Dana, who made a reputa-tion for himself in the literary and journalistic world, and whose articles were n marked feature of the paper in those days. He was succeeded by

New

Greely, who was proprietor-editor till his death in 1872. He was a man of great character and personality, and under his editorship the paper came to be noted for its sanity and trustworthiness. It was a power ia the eivil war of N. and S. The editorship was taken over by Mr. Whitelaw Reid, who had joined the staff in 1868, and who showed great journalistic ability. Under his editorship the near more than retained its the paper more than retained its earlier reputation. It has a large foreign edition, also a Sunday edition with a magazino supplement which is widely read. Its dally eirculation is about 70,000. It costs 5 cents, and it was therefore the pioneer of the halfpenny paper, of which the Daily Mail is the English equivalent.

New York World, founded in 1860 as a religious paper, and takea over lu 1869 by Manton Marble, who edited it until 1883, when it was purchased by Joseph Pulitzer, who greatly inereased its circulation and popularity during his many years of editorship. During this time the famous Pulitzer building was built. Present circulation, over 300,000 daily. Large Sunday edition with ecloured prints.

Price 5 cents (2½).

New Zealand, the name of a battle erniser given to the Imperial navy by the Dominion of N. Z. It was launched at Fairfield in July 1911, commissioned at Govan on Nov. 19, 1912, and completed to full crow at Devonport on Nov. 23, 1912. Ton-nage 18,800. Speed 28 knots. New Zealand. The Dominion of

N. Z. consists of a group of islands in the Pacific Ocean, about 1000 m. to the S.E. of Australia. The three the S.E. of Australia. chief islands are: North Is., with a length of 550 m., a maximum breadth of 250 m., and an area of 44,468 sq. m.; South Is., or Middle Is., with a length of 550 m., a maximum breadth of 200 m. and an nrea of 58,525 sq.m.; and Stewart Is., with a length of 30 m a breadth of 25 m., and an area of 665 sq. m. The coast-line of N. Z. is deeply indented in parts, and nearly equal la extent to that of Great Britaln, but it is not so rich in harbours and navigable estuaries. North Is, is much more irregular in suspethin South Is, the coasts of which are remarkably imbroken save in the N. and S.W. The harbours are very unequally distributed, and long stretches of coast exist without a single natural harbour. The princh Is. is much more irregular in shape William Laffan, who kept up the high single natural harbour. The princhlovel the paper had attained until he pal straits are Cook Strait, Foreaux died in 1909. It has a circulation of Strait, Coronandel Channel, and French Pass. Kapiti Is is in Cook the Strait, and Ruapuke Is. in Foreaux the Strait, whilst there are several islands and islets off the coasts of the main The surface of N. Z. Is exceedingly diversified; the most striking feature in the relief of the eountry is the mountain range which traverses both islands from Windsor Point in the S.W. of South Is. to East Cape in the N.E. of North Is. In the North Is. the two principal sections of the range are the Ruahine Range and the Tararua Mountains. To the W. aud N. of the Ruahine Range are the Kaimanawa and other ranges. volcanoes of Tongariro (active, 6500 ft.) and Ruapeliu (extinct, 9195 ft.) are to the S. of Lake Taupe; the most noteworthy peak in North Is., how-ever, is Mt. Egmont (8300 ft.), which stands in the centre of a promontory on the S.W. coast and is conical in shape. In the South Is. the main range is eailed the Southern Alps; this range is crossed at intervals by low passes, but its highest summits reach an altitude of over 10,000 ft., are covered with perpetual snow, and have immense glaciers in their higher valleys. Between Mt. Franklin and the W. coast are the Paparoa Mts., and between these and the E. coast are the Kai Koura Mts. and the Lookers On Mts. The lofticst peak in N. Z. is Mt. Cook, over 12,000 ft. high. Aithough N. Z. is mountainous it has extensive plains, lying mostly on the extensive plains, lying mostly on the extensive plains, lying mostly on the western side of North Is. and on the including gold, coal, iron ore and iron castern side of South Is. The general sand, some silver, tln, copper, lead, character of the N. Z. seenery is si lar to that of the British Isles, though the latter have nothing its mountains or its lakes, springs, geysers, etc. N. Z. abounds country is sheep-farming, eattle-in rivers, most of which are, however, rearing coming next, then agriculture shallow and rapid, and none are navigable for more than a short portion of their length. The chief rivers in North Is, are the Waikato, the Wairoa, the Thames, the Piako, the Wanros, the Thames, the Piako, the Wanganui, the Manawatu, and the Hutt; in the South Is. the Clutha or Molyneux, the Waitaki, the Grey, and the Buller. The lakes of the North Is. are of voleanic origin, while the Alpine lakes of South Is. have been formed by glacial action; of the former may be mentioued Lake Taupo, and of the latter Wakatipu. Before the eruption of Mt. Tarawera in 1886, the Rotomahana Lake (hot lake; Rolo is Maori fer 'lake') was widely eelbrated for its pink and widely eelebrated for its pink and white terraces and boiling springs, which were then destroyed. The climate of N. Z. is temperate and healthy, and similar to that of Great Britain, save that it is warmer and America. The more equable. More rain falls on N. Z. Shipping Company; the Union the W. than on the E. coast, and Steamship Company; the Oceanic

climate is more equable the former. Naturally, considerable variations are met with in different parts of a country which extends for over 1000 miles from N. to S.; the extreme N. of North Is. is subtropical in character, whilst severe frosts and deep snew on the uplands are common in winter in the South Is. There are seareely any truly indigenous animals in N. Z., but the native plants are numerous and include many peculiar species. There are about 120 indigenous forest trees, all of them evergreen; the Kauri pine, which supplies 'Kauri gum,' several kinds of cedar, red and white birehes, and the iron-wood tree may be mentioned. A great variety of ferns is found, and large tracts are covered with nutritious indigenous grasses which support millions of sheep; the N. Z. flax (Phormium tenax) is a vegetable produce of considerable importance, being much used in rope-making. Birds are numerous, and also include many species peculiar to the country. Fresh-water fish are not numerous, with the exception of eels; but many varieties of edible fish are found round the shores, and excellent oysters. There are no reptiles.

The soil of N. Z. is very fertile, the chief crops grown helng wheat, maize, potatoes, and root crops, whilst fruits

rearing coming next, then agriculture and mining. The commerce of N. Z. is principally earried on with the United Kingdom and Australia: the chief exports are wool, frozen meat, gold, butter and eheese, hides, skins and leather, N. Z. flax, kauri gum, tallow, grain, pulse, and flour; whilst the imports are elething, iron and steel goods, paper, boeks, etc., sugar, wines, beer and spirits, tobacco, fruits, tea, oils, coal, and faney goods. In 1911 the value of the imports was £19,545,879, and of the exports £19,028,496. The principal perts of the country are: Auckland and Wellington in the North Is., and Port Lyttelton and Port Chalmers in the South. Regular and frequent steam traffle exists between all the principal ports of North and South Is., and communication the Australian

and Albion Company. Most of the railways in the country are owned by the state, there being over 2800 miles of line in the dominion; the principal lines are from Auckland to Mokau, Rotorua, from Wellington to Napler, New Plymouth and Nanawatu. in the North Is., and from Culverdon to Lyttelton, from Invereargill to Bluff Harbour and Kingston, from Picton to Awatere, and from Nelson to Aoki-The dominion is governed by a governor appointed by the Crown, of whom two are Ma bers of the House of number 80, four of wl and are elected trienmally by auut suffrage. The members of the Upper

House are paid £200 and of the Lower House £300 a year. Education is free, secular, and compulsory; the University of N. Z., to which are affillated the colleges of Dunedin, Christchurch, Wellington, and Auckland, confers degrees. There is no state church, and no state aid is given to any form of religion. The chief towns are Wellington (the capital since 1865), Auckland (previously the capital),

Napier, Nelso cargill. The cargul.

1,008,468, exclusive of 49,044 histories. An eight-hour day is in force in the

> e re-, and The sique of all

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the Polynesian peoples, being superior in every respect to the aborigines Their language is a of Australia. Polynesian dialect differing but slightly from the Hawaiian and other similar languages. The Maoris are diminishing in number, a gradually disappear as a race. N. Z was first discov peopled by the Maoris, who lauded here from some of the

Islands in the 14th or 15th in

rst

but was separated therefrom in 1841. Cha

ileh the ned is as nded by his

Steamship Company; Shaw, Savill, the N. Z. Company in 1840; (2) Auckland, established in 1840, by the first governor, Captan Hobson, who made the first treaty with the natives, that of Waitangi, by which the sove-reignty of the island was transferred to Great Britain; (3) New Plymouth, founded in 1841 by the N. Z. Company; (4) Nelson, founded in 1841: (5) Otago, founded by a Scottish company 1848; (6) Canterbury, founded in 1850; (7) Hawkes Bay, part of Wellington prov. until 1858; (8) Marlborough, a part of Nelson until 1860. See H. a legislative council, and a House Broadhead, State Regulation of Labour of Representatives. Members of the and Labour Disputes in New Zealand, Broadhead, State Regulation of Labour former chamber are nominated by the 1908; R. Horsley, New Zealand: a governor for a term of seven years (if History, 1908; W. P. Reeves, New before 1891, for life): 1908; State Experiments in New Zealand, 1902 D. Ferguson, Bush Life,

New Zealand Flax, see FLAX, NEW

ZEALAND. New Zealand Railways are practically all owned by the state. The principal routes are from Hurunui to Bluff, and between Wellington and New Plymouth, passing through Napier. In 1912 the total mileage in the colony was 2827, composed of 1173 government lines in the North Is., 1625 in the South, and 29 m. owned by private companies. total amount spent on the railways up to that time was £32,689,779. In 1911-12 the revenue was £3,676,509, and expenditure £2,465,896; 5,887,918 of goods were carried, and 11,891,134 passengers.

Next Friend, in law, a phrase used to denote the person who in any transaction acts on behalf of another, where that other either from youth, mental infirmity, coverture or from some other cause entailing legal incapacity, cannot act for himself (see also Capacity, Infancy, Majority). The N. F. of an infant or minor is not necessarily his parent or legal guardian, for the court will in its discretion allow any one to reprecont on infant in an action.

KIN, NEXT OF, and · TUTES OF.

69-1815), a cele-the first French He was a in a hussar tion began.

ng friend of

in clim he was took place in made a general of division in 1799. ionary settle. Ho was interim commander of the ionary settle- Ho was interim commander of the ment was established at the Bay of army of the Rhino for a short time, Islands. N. Z. was made a dependuring which he frustrated an im-dency of New South Wales in 1839, portant movement of the Archduke Charles against Massena and the "er the peace of i anxious to win ' night about

Niagara

the establishment of the empire, he was made a marshal. In 1805 he stormed the entrenchments of Elchingen, and was created Duke of Elchin-He afterwards rendered important services in the Tyrol; contributed much to the French successes of 1806 and 1807; and served in Spain with great ability in 1808 and 1809. In 1812 he received the command of the third corps d'armée, and greatly distinguished himself at Smolensk and the Moskwa, in consequence of which he was created Prince of the Moskwa. He had a principal part in the campaigns of 1813 and 1814. On Napoleon's return from Elha, N. was sent against Napoleon at the head of 4000 men; but N. went over to his side. In the battle of Waterloo, he commanded the centre, and had five horses shot under him. After the capitulation of Paris he retired to Switzerland; but a costly Egyptian sabre, the gift of Napoleon, led to his being suspected by an official, and arrested. He was condemned to death for high treason, and was shot in the garden of the Luxembourg. His sons 1833. See .

Neyland. of Pembro

side of Milford Haven. It has a floating stage and pontoon.

Nezhin, or Nizhan, a tn. of Tchernigof, Russia, on the Oster. Has trade in tobacco. Pop. 32,000.

Nez Percés (so called from their custom of wearing nose-rings), a tribe of N. American Indians, settled in Idaho, and eastern Washington and Oregon. After the Ncz Perces War in 1877 the survivors wore sent to Indian territory, but were transferred to their present district in 1884. They now number about 1800.

Ngami Lake, a former lake of W. Rhodesia, British South Africa. It was discovered by David Livingstone in 1849. It was 70 m. in length, with a breadth of 20 m., but now it is only

a swamp.

Ngan-ching, or Ngan-king, a tu. of China, and the cap. of the prov. of Ngan-hui, on the l. b. of the Yang-tse-kiang R., 176 m. E. of Haukow. In 1897 it was opened to foreign trade.

Pop. 40,000.

Ngan-hui, or An-hui, a prov. of China, hounded on the E. by the provs. of Kiangsu and Chekiang, ou the W. by Hupe and Honan, and on the S. by Kiangsi. 1t is watered by Yangtsetea-growing districts of the province. Other products are wheat, cotton, extent of 5 ft. each year. It is herice, and indigo. The province is lieved that the original Falls were at mountainous in the W., reaching an Lewiston. The Government Reser-

Hortense Beauharnais, and appointed elevation of over 7000 ft. The N. him inspector general of cavalry. On section is drained by the Huai R. Iron and coal are found, but they are not mined to any great extent. Its capital is Anching, and its treaty port is Wuhu, which has railway communication with Wenchow in Chekiang. Area 54,810 sq. m. Pop. 23,670,314.

Ngau-lu, a tn. of China, in the prov. of Hupe, situated on the l. b. of the Han Kiang R., 65 m. N.E. of Ichang.

Pop. 60.000.

Ngaundéré, a tn. of German Kamerun, W. Africa, 156 m. S.S.E. of Yola. Pop. 30,000

Ngauruhoe, see Tongaribo. Ngornu, a tn. of Bornu, W. Africa, on the S.W. shore of Lake Chad. Pop. (est.) 20,000 to 50,000.

Niagara (formerly Newark), a tn. and summer resort of Ontario, Canada. in Lincoln co., on Lake Ontario, at the mouth of the Niagara R., 15 m.

from the Falls. Pop. 1400.

Niagara Falls: 1. A city of Ontario, Canada, in Welland, on the W. bank of the Niagara R., opposite the Niagara Falls. It is connected with Niagara Falls, New York, by three bridges. There are several factories which utilise the water-power from the Falls, and a beautiful park, built along the river bank. Pop. 11,000. 2. Formerly Clifton, a city of New York state, U.S.A., in Niagara co., on the E. bank of the Niagara R., at the Falls, 18 m. N.N.W. of Buffalo. The bridge which here crosses the river is 1240 ft. long, and there are also two railway bridges. The Falls supply water-power for the city, which is a shipping centre, with im-portant manufs. Pop. (1910) 30,445.

Niagara Falls, on lower Niagara R., which is 20 m. in length, and connects Lake Eric with Lake Ontario. The Falls are the greatest in the world for volume of water. At Goat's 1s. the river divides. There are two distinct falls, side by side: the American Fall, a sheer descent of 167 ft., and 1060 ft. wide; and the Horse Shoe Fall, on the Canadian side. The Snoe rail, on the Canadian side. The volume of water of this Fall is terrific, and a depth of 158 ft. is taken in a leap. The spray is like heavy rain. It has heen estimated that the water is at least 20 ft. in thickness. The Fall is over a grand curve of rock measuring 3010 ft. The Whirlpool is just below the Falls. a Whirlpool is just below the Falls, a raging mass of turbulent water. The river, now a quiet, gently flowing stream, enters the Lake of Ontario at Kiangsi. 1t is watered by Yangtse-Lewiston. The drop between Lakes kiang, which flows through the fertile Erie and Ontario is 32 ft. The edge of the Horse Shoe Fall is receding to the extent of 5 ft. each year. It is helieved that the original Falls were at

vations, on both sides of the Falls, from various well-known lays and have been turned into fine parks. The little steamer Maid of the Mist goes close up to the Falls, and it is possible, though rather dangerous, to walk under them. One of the best points of view of the fine Horse Shoe Falls is from the railway track, and observa-tion cars are run, and the trains are stopped for some minutes for the henefit of tourists. The Falls were discovered in 1678 by a French priest, but his description was laughed at as a traveller's tale. For the last twentyfive years the water has been used for industrial purposes, many manufac-turing plants being worked by its This withdrawing of the! water for commercial use is heginning to tell, and a depletion of the volume of water over the Falls has been noticed lately. Many thousands of Many thousands of tourists visit the Falls overy summer. The sight is even more wonderful in winter when the gigantic Falls are in tho grip of frost and snow, and huge icicles hang glistening in the sun-shine. Three bridges span the river. The view from the suspension bridge is magnificent, whilst the fine culverer bridge is a triumph of modern engineering.

engineering.

Niam-Nlam, or Azandeh, a raco of negroid stock, who formerly inhabited the region lying between the Congo and the Upper Nile, now known as the Welle and Ubangi districts in the N. of the Belgian Congo, Equatorial Africa. They are allied to the Nubes: have a dealallied to the Nubas; have a dark reddish skin, ohlique eyes, and gener-rally round features. They practise cannibalism, and are somewhat in-elined to obesity. The women do the work and attend to the cultivation of their crops, while the meu engage in raiding expeditions and hunting. They are fond of music and show an aptitude for wood-carving and the fashioning of pottery. The kingdom of the N., which flourished for over two centuries, was destroyed by an Arab invasion, since when the inhabitants were dispersed. Sec Schweinfurth's Heart of Africa, 1873, and W. Junkor's Travels in Africa, 1890-92.

Nias, a Dutch island, off the W-coast of Sumatra, with an area of 2100 sq. m. Its surface is mountain-Ricc, ececa-nuts, bananas, pepper, tobacco, and sugar are grown. Pop. 250,000.

Nibelungenlied, or Der Nibelunge Not, an old German eple poem embodying stories and traditions which were current in Germany before the writing of this poem, which dates from some time near the beginning of the

poems, but probably from a more or less connected account of the 12th century, and according to some authorities, from Latin poems also. The story relates how Siegfried, son of the King of the Netherlands, and the possessor of the treasure of the Nh-lungs, wins as his wife Kriemhild, the sister of Gunther, King of the Burgundians. For the latter he obtains the hand of Brünlüld, Queen of Iceland, by causing him to be successful in three trials of strength. This he accomplishes by wearing a magic cloak, and thus being invisible beside Gunther. Some years after, Brünhlid, Gunther's wife, brings about the murder of Siegfrled by means of Hagen, who by treachery finds out the hero's vulnerable spot and slays him. He afterwards secures the treasure which has become the property of Kriemhild, and huries it in the Rhine. The widow finally accepts the hand of Attila (Etzel) King of the Huns. She then induces Gunther and Hagen to visit her court, and they with members of their train are slain at the instiga-tion of Kriemhild, who had always vowed vengeance on Hogen. She herself. however, is also slain at the end of the conflict, which is a scene of awful slaughter. The Klape, a poem written about the same time as the N., deals with the lament of those who survived the destruction. The ehief editions of the N. aro those of C. Laohmann and K. Bartsch, 1880; while there are English translations by A. G. Foster-Barham, 1887, and Margaret Armour, 1897; see also Everyman's Library. Nicæa, a city of ancient Bithynia, in Asia Minor, on the eastern shore of Lake Ascanla. It was built by Antigonus, the sen of Philip, in 316 B.C., and named Antigonea, but the name was changed by Lysimachus to N. in honour of his wife. N. was of great importance under the Roman and Byzantine emperors, 1 streets and monuments. having In ecclesiastical history it is noted as the seene

of two councils: the First Œemnenical Council was held here in 325 A.D. to discuss among other things the Arian question and the Meletian sehism, and to fix the date of Easter, whilst the Seventh Leumenhal Connell, held there in 787, discussed mainly the question of image worship. N. was also the name of Nice (q.v.).

Nicander, Karl August (1799-1830), a Swedish peet, born at Strengus, and educated at the University of Upsala. In 1820 he published his first volume of poems, and by his powersome time near the beginning of the ful tragedy Runesvardet (The Runle 12th century. Itsauthoris not known, Sword), he won a foremost place but he drew his materials not only among his literary contemporaries. Nice

He also wrote Runor (The Runes), Enzio, 1825, and The Death of Tasso, for which he was awarded a medal by the Swedish Academy. After a tour in Italy in 1827 he published Memories of the South.

Nicaragua, a republic of Central America, helwcen the Carinhean Sea and the Pacific Ocean. Area 49,200 sq. m. There are lagoons, estuaries, and swamp lands along the Caribbean Sea but recly coart on the Pacific Sea, but rocky coast on the Pacific Ocean. Chief harbours are Cornito, Brito, and St. Juan. In 1894 the Mosquito coast was annoxed. The Cordillera de los Andes, a volcanic range, crosses N., Coseguina (3835 ft.) and El Viejo (6267 ft.) being the highest summits. Capital of republic, Managua; other important towns are Granada, Leon, and Grey Town. The Pis-Pis mining district is on the Segovia R. Two large lakes, the Managua and Nicaragua, are situated in Central N.; the latter is 100 m. long, area 2900 sq. m. It is the largest sheet of water between Lake Michigan, U.S.A., and Lake Titicaca on the Peruvian horder. Towards the St. Juan the depth is only 8 ft. owing to vast accumulations of silt hrought down by the Rio Frio. There are five rapids on the St. Juan R., which greatly impedenavigation. Education is free and compulsory. There are two universities, but comparatively few secondary or normal schools. Coffee, secondary or normal sonous.

bananas, rubber, and hides are the
chief products. There are rich undeveloped mineral resources, but gold
is mined on the Caribbean coast. The olimate is tropical except on the high lands. The government consists of a president, appointed every six years, and one chamber of 36 members appointed for a similar period. 600,000.

Nicaragua Canal. In 1884 a treaty was made hetween the governments of U.S.A. and Nicaragua with the object of cutting a ship canal to link up the Atlantic and Pacific oceans. The canal was begun at Greytown in 1889, and its total length would have been about 170 m. including Lake Nicaragua and the San Juan R. Less than 30 m, would have had to be excavated. Operations were, however, suspended in 1893, and attention was directed to the Panama Canal, whose last barrier was blown away hy dynamite in Oct. 1913, and the waters of the Pacific mingled with those of the Atlantic. The N. C., though it would have been a longer route, presented fewer difficulties in the way of natural barriers and fewer gigantic rocks to engineer and hlast. The scheme was abandoned owing principally to the political unrest of

the country.

Nicaria, Nikaria, or Kariot, an island of the Grecian Archipelago, 12 m. from Samos. It is associated with the Greck legend of Icarus, who is supposed to have met his death near here after his acrial flight.

Nicastro, a com. of Italy in the prov. of Catanzaro, 16 m. W.N.W. therefrom. It is a hishop's see. There is a ruined castle in which Frederick II. was confined. Pop 18,000. Niccola Pisano (1206 - 78), see

Pisano

PISANO.

Niccolini, Giambattista (1781-1861) an Italian poet and dramatist, born at San Giuliano. Tuseany. N. s first poem, *Peste de Livorne*, appeared in 1804. From 1807-8 he was secretary and professor of history and mythology at the Florentine Academy of Fine Arts. His first dramatic work was the tragedy of Polissena (1810), followed by Ino e Temislo, Edino, and Medea. His first political drama, Nabucco, appeared in 1815; another invective against absolute power is Antonio Foscarini (1827), the most popular of all his dramas, although Arnoldo da Brescia is his literary masterpiece (Eng. trans. hy Garrow, 1846). See his Opere edite e inedite, by Gargiolli, 1863-80; also monographs hy Barelli, 1888; Ostermann, 1900; and Looni, 1901.

Niccolo, Alunno (c. 1430-1502), sec ALUNNO, NICCOLO.

Nice (ancient Nicaa, It. Nizza), a seaport and opiscopal see of France. cap, of the dept. of Alpes Maritimes sm, S.W. of Monaco, at the mouth of the Pagllone. The city is sheltered on the N., but is exposed to the *Libeccio*, a moist S.W. wind, and is occasionally visited by the mistral, the sirocco, and the tramontane. It has, novertheless, a delightful elimate, supposed to he particularly heneficial to gout and chest complaints. The number of visitors in winter is seldom less than 15,000 and has reached 45,000. In the centre of the town is a high hill (318 ft.), on which the castlo, destroyed by the Duko of Berwick (1706), formerly stood. The fashionand residential quarters lie to the W. Along the shore and round the hase of the hill stretch fine promenades. The chi-Roman

Gothioe (1835), the municipal casino gallery, and observatory. To the E. of the hill is the harbour and port. There is a large coasting trade, and the chief exports are flowers, oranges, lemons, perfumes, wines, liqueurs, soap, and tobacco. The inhabitants execute fine inlay work in olive wood, and also manufacture art pottery. The ancient town of Nicæa was founded by the Phocæans from

Massalia (Marseilles) and so called but was less successful in the West in commemoration of a victory (Gk. He was assassinated by his wife and rίκη) over the Lighrians. In the 2nd century R.C. it fell into the hands of the Rumans. In the 9th and 10th centuries A.D. it was more than once sacked by Saracen invaders, and was plundered by the Turks (1543). From 1388 until 1706 (save between 1600 and 1691) it belonged to Savoy, from 1706-13 to France, then it was in the possession of Savoy until 1744, reverting to France and Spain in that year. From 1792-1814 it was in tho county of N., France: it then belinged France finally over it. It is the baldi, Massena, It is the

Pop. (19... painter. sult Tisserand, Histoire civile et Religieuse de la Cité de Nice, 1862; Nash. Guide to Nice, 1844; Durante, Histoire de Nice. 1823-24; Fervel, Histoire de Nice et des Alpes Maritimes depuis 21 si'cles, 1862; Home, Alimg

the Rivieras of France and Italy, 1908.
Nicene Creed, the only creed of the Churchwhich has received æcumenical sanction, was drawn up at the Conneil of Nicrea in 325 A.D. (see ARIUS). It was in the form familiar to Westerns in the Roman Mass and the Anglican Communing service, but terminated at the words 'And I believe in the Holy Ghost.' It was re-affirmed at the Council of Constantinople (381), and the rest of the creed, as we have it, was then added, with the exception of the words filingue and the Son.' For this, see CREED.

Nicephorus (c. 758-828), patriarch of Constantinople (806); defended the worship of images against the Iconoworship of images against the 1cono-clasts, and was consequently banished (1882). Among his other works are: to a convent in Asia by Leo the Armenian (816 A.D.). He wrote Chronographia Brevis and Breviarium Historicum, also several other his-torical works. He is numbered among the suints of both the Greek

and the Roman Church.

Nicephorus I., Empernr of the East from 802, a nativo of Seleucia, who became lord high treasurer under the Empress Irene, whom he subsequently dethroned. Various conspiracles against him, notable of Bardanes and Arsaber, ho completely. He made a trea Charlemagne, but in a war with the Christmas rejoichus. Saracens and Bulgarians was sur- Nicholas, ho nam

prised and slain in 811. Nicephorus 11. (c. 912-969), Emperor of the East from 963-969. In p66-963, in a brilliant series of campaigns against the Saraceus, he cappaigns against

the devotion of the army, .

him emperor in 963. Ho : Cicilia and reduced most . .

nephew.

Nicephorus III. (Botaniates), Emperor of the East from 1078-81. He revolted from Michael VII, in 1078 and marched upon Nicra. His election was supported by Alexins Commenus, who helped him to defeat his viral Exponent but the facility rival, Bryonnus, but who finally quarrelled with N. and stirred up the army to depose him.

Niceron, Jean Pierre (1685-1738), a French compiler, born in Paris. His chief work is his series of literary to Sardinia until 1860, in which year | bingraphies Mémoires pour servir à "Line"; des hommes illustres de la ne des lettres, avec un catalogue

de leurs ouvrages (49 vols., 727 and 1745.

Niche (Fr. niche, It. nicchia, probably from mitulus, sea-mussel), a eavity or recess sunk in the wall of a building. It was generally used for the reception of a statue, vase, etc., and was must often semi-octagonal or semi-hexagonal in shape, although the Roman Ns. were semi-eircular. The heads were formed of grooved vaulting, and the Ns. were ornamented with pillars, consoles, architraves, etc., according to the prevailing style of architecture.

valing style of architecture.
Nichol, John (1833-94), a British
author, born at Montrose. While at
Oxford as a coach he formed, with
Albert Venn Dicey, Thomas Hill
Green, Swinburne, and others, the Old
Mortality Society in 1856-57. In 1862 he was appointed professor of English literature at Glasgow. In 1865 he visited America, and wrote a historical review on American literature for the Encyclopædia Britannica

Patara in Lycla. Ho is specially honoured as the guardian and patron of children and of scholars, as also of travellers, by sea and land, and merchants,

the Greek

in the Santa Claus of

Nicholas, the name of five popes and one anti-pope.

Nicholas I., sumetimes called the Great, succeeded Benedlet III. in 858.

> in ennnection with the arch, Ignatius of Con-10 divorce of Lothair,

King of Lorraine, and with the right! of bishops to appeal to Rome against

the verdiet of their metropolitan, as exemplified in the case of Rothad of Sosson. Nicholas L died in 867. Nicholas 11. was pope from Dec.

1018 to July 1061; he was personally of very little account, and owed his importance to the counsel and influence of Hildebrand (whose policy of reform he pursued). Cardinal Humbert, and Bishop Boniface of Albano.

Nicholas III, was pupe from Nov. 1277 to Aug. 1280; he was a good politician, and strengthened the papal power in Italy, but incurred the

accusation of nepotism.

Nicholas IV. was pope from Feb. 1288 to April 1292; a member of the Franciscan order, his main object was the extirpation of heresy by crusades.

1000 scribes and scholars. During his pontificate, in 1449, the resignation of the antipope, Felix V., put an end to the papal schism. The fall of Con-stantinople in 1453 was a great blow

to him, Nicholas V. was antipope in Italy from 1328 to 1330 during the pontificate of John XXIII. at Avignon. He resigned in 1330, having been excommunicated by John in 1529, received pardon for his sins, and was been in the proposed to the same of the s

kept in honourable imprisonment in the papal palace until his death in 1533. Nicholas I. (1796-1855). Russian emperor from 1825 till 1855, the third son of Paul I., was born at St. Peters-burg. He visited England and Europe in 1816, and in the following year married the eldest daughter of Frederick William III. of Prussia. On the death of Alexander I., he succeeded to the throne, as Construction of the control of the cont stantine, the real heir, had abdicated in his favour. Owing to some uncertainty, however, there was an interregnum of three weeks' duration, and and a serious and long-prepared military conspiracy broke out. The insurgents relied too much on their comrades joining them, and N. was able to put down the rising with cruel firmness. During the early part of his reign some reforms were carried out, but N. soon reversed to the autocraey of the old czars, supported by the force of arms. The wars with Persia and Turkey ended in victory for Russia (1828), and the crushing of the Poles was accomplished, but they were accompanied by a terrible loss of men, as was the Crimean War later. He was exceedingly stern and harsh when crossed, but had a strong sense of duty.

Nicholas II. (b. 1863), presont Emperor of all the Russians, eldest son of Alexander III., whom he succeeded in 1894, and nephew of the late King Edward VII. of Great Britain; born at St. Petersburg. As erown prince and president of the Trans-Siberian Railway, travelled in the Far East. In 1896 visited France and followed up the understanding between that country and Russia by signing definite military agreements with President Faure. In 1899, inspired by traditions of the Holy Alliance, he brought about the convention at the Hague of the first International Peace Congress. accession to the throne marked the transition from the extreme anto-eracy of the ancient to the new Russian constitutionalism of modern régime, though he himself, in reply to the deputation of 1895 on Nicholas V. was pope from March in reply to the deputation of 1895 on 1447 to March 1455; he was a man his accession, repudiated the elaim-of deep learning, and employed over of the people to share in matters of 1999 or 1999.

land tenure system as against growing pretensions of social democracy, especially in the direction of extending the principle of 'zemstvos' or local elective assemblies to the pro-Left St. Petersburg for a vinces. year in 1905 during the 'Liberator' crisis of that year and the reverses in the war with Japan as a result of a shot from a sainting battery on a ceremonial occasion endangering his life. His visit to Cowes in 1909 enhanced the better understanding between the Russian and British people which began with the establishment at St. Petersburg of an Anglo-Russian Chamber of Commerce in

Nicholas I. (b. 1841), King of Montenegro, was born in the village of Niegush. In 1860 Nicholas was proclaimed Prince, and in 1862 took part in the war between Montenegro and Turkey. In 1900 he took the title of Royal Highness, and in 1910 that of King, in accordance with a petition from the Skupshtina. He is the descendant of a long line of fighting men. but his talents as a statesman are of no mean order; bis rule may be de-

an account of the late war with imkey, see Balkan War.

Nicholas of Damascus (c. 74 B.C.), a Greek historian, poet, and philosopher, born in Damaseus. While still a boy were invaluable. On Sept. 14, 1857, he composed tragedies which were performed at Damaseus. He was the friend and possibly secretary of Herod, King of Judea, whom he accompanied to Rome in 13 B.C., when he won the favour of Augustus. Among the works attributed to him, hesides the collection of tragedies and eomedies, are a History of Assyria; Lives of Augustus and Herod; History of the World; Book of Principles; Book of the Soul.

Nicholas of Hereford (fl. 1390), a Lollard preacher and author, horn probably in Hereford. A close friend and supporter of Wiekliffe, he was condemned and oxcommunicated by the church council iu 1382 for his support of the Lollard doetrines. An appeal to the pope against his sentence led to his imprisonment in Rome. He escaped, but was captured in England. In 1391 he recanted, and after holding several offices under the Crown retired to a monastery. Ho alded Wiekliffe in his translation of

the Bible.

Nichols, John (1745-1826), horn at lington. When thirteen he was Islington. placed with William Bowyer, the printor, to whose business he succeeded in 1777. In 1782 ho published Biographical and Literary Anecdotes of William Bowyer and many of his learned Friends

Processions of Q and, in 1797, Manners and Times in Engla

works of which he was either author or editor amounted to fifty-seven. The Gentleman's Mayazine passed into his hands in 1778, and continued under his direction until his death.

Nicholson, Henry Alleyne (1844-99), an English biologist, horn at Penrith, Cumberland. In 1871 ho became prosoveral works on fe

Nicholson, John general. In 1841 defenee of Ghazri tinguished himsel

mately captured and imprisoned at and also from limetic the sulphide Kabul. He was rescued by General of nickol and cobait. The neetal is Pollock after some months incarceration. He became adjutant of his furnace methods, by the 'earboury' regiment in 1843, and two years later process, and by the wet nicklod. In regiment in 1843, and two years later was given an appointment in the commissariat. He saw activo service on

he commanded the main storming party in the assault on Delhi, but was mortally wounded. There is a biography by L. J. Trotter, 1897.
Nicholson, William (c. 1782-1819),
the 'bard of Galloway,' horn in Kirkeudbrightshire. He became a peclar, and wroto verses on his wanderings The preface to his Tales in Verse and Miscellaneous Poems, descriptive of Rural Life and Manners (1814), acknowledges his indebtedness to Hogg. His best poem is The Brownic

of Blednoch, & folk-love hallad. Nicias, a famous Greek painter, son of Nicomedes, born at Athens, and flourished probably between 350 and 300 B.c. According to Pliny, he was employed by Praxiteles to colour marble statues. Among his chief works were: 'Neeromantia Homeri,'

Calypso," Diana, and Hyaeinthus.

Nicias (e. 470-414 B.C.), an Ather nian statesman and general, belonging to the aristocratic party. He was several times a colleague of Pericles in the stratagia, and on the death of the latter became leader of the aristocrats, and opposed Cleon. Prior to the Sicilian expedition he achieved a number of minor successes, and in 421 took a prominent part in the Peace of Nicias, which ter-minated the first part of the Pelo-War. In 418 ho was commanders in the naval

against Sielly; after the Melbiades, was practically immander. In 415 B.C. he led the great expedition to Syraeuse:

but the enterprise terminated in disaster, and he was put to death by the Syracusons. He contributed largely to the downfail of Athens. See Plutarch's Life of Nikias, 1887.

Nickel (symbol Ni, atomie weight 58.7) is a metal resembling iron. The ressor of natural history at the University of Toronto, in 1874 professor of biology in Durham College of Science; from 1875-82 professor of natural history at St. Andrews, and in 1882 at Aberdeen. Ho published several works on facilities of the state of nickel and magnetic states of the state of the st in Canada. In this ore the metal appears to be present as pentiandite (FeNI)S. Garnierite (indefinitely which is mined at Nounea.

edonia, is another source of al. In Europe the metal is from Kupfer nickel (nickel and chloanthite (NiAs1).

the furnace method the ero is alternately roasted and melted, as In many occasions, notably during the the case of copper (q.v.), to remove second Sikh War. His promotion was iron and sulphur, and then heated rapid, and at the outbreak of the with charcoal when the metal is ob-Mutiny he was brigadier-general. His tained. In the more modern process services during that troublous period a matte of the sulpbide is obtained,

which is refined in a Bessemer converter and then treated with charcoal (NiD+C=NI+CO). The carbonyl protess discovered by Dr. Mond depends on the fact that freshly reduced nickol combines with carbon mon-oxide below 150°C. to form nickel ear-bonyl, Ni(CO). The ore is roasted, re-duced at 400°C. by the action of water gas, and then exposed in chambers at 80° C. to the action of a current of CO. The carbon monoxide leaves chambers charged with nickel carbonyl, and is carried through tubes heated to 180°C. At this temperature the carbonyl is decomposed, the nickel is deposited in the tubes, and tho carbon monoxide can be used over again. In the wet method the roasted ore is treated with hydrochloric acid, and the solution obtained is diluted with bleaching powder and milk of lime to precipitate iron and arsenie. The nickel is finally obtained as oxide by adding milk of lime, and the oxide is reduced with carbon. The metal thus obtained is generally brittle, due to occluded carbon monoxide, and this is got rid of by adding a per cent. of magnesium or aiuminium. The pure metal is lustrous and white like silver. It is ductile, malleable, hard, and tenacious, and tarnishes in moist air. Its melting point is about 1450° C., it has a specific gravity 8.8, is magnotic, and is a fair conductor of electricity. Nickel is used largely for electroplating steel and iron articles, but is of most importance in its alloys. It is used extensively for comage in an alloy with copper (German silver), Nlekel silver is an alloy of nickel with zine, Iron and copper. By adding tungsten to German silver, platinoid resistances are made for low resist-ances in electrical work. Nickel steel, owing to its hardness, is used for armour plates and construction of vessels. The steel contains 3-3.5 per cent. of Ni and about 0.3 per cent. of carbon. Addition of 3 per cent. of Ni to steel is said to increase the life of firebox stays and boiler tubes made from it. Nickel only forms a single series of salts, derived from the oxide NIO. The monoxide is a greenish powder, obtained by hoating the carbonate or hydroxide out of air, and is dissolved in acids yielding the common green salts. It is used for giving the soft brown colour to noticer. NIO the block oxide, here Ni₂O₂, the black oxide, hepottery. haves like a peroxide with HCl and H,SO4, yielding the ordinary salts of nickel with elimination of chlorine and oxygen respectively. The salts of nickel are green in colour, have a sweetish, astriugent taste, and are used as emeties.

Nickel Plating, see METALLURGY. Niekel Silver, see German Silver. Nicker, in Teutouic mythology, is a water-spirit, which appears in the form of a grey horse with its hoofs reversed on the seashore. The legend is that if any one mounts the horse it gallops away and plunges into the sea with its burdeu. There is, however, a means of taming this animal and making it work. See Nix.

Nicobar Islands, a British group of ninetcen islands in the Bay of Bengal, between 6° 45' and 9° 15' N. and 93° and 94° long., between Sumatra and the Andaman Is., and under the same administration as the latter. islands, of which only twelve are in-habited, have an aggregate area of about 635 sq. m. There are two groups, Great and Little N., and several others to the S., and Car N., Camorta, and the remainder to the N., separated by Sombrero Channel, 36 m. broad. Great N. is the largest Island, with an area of 333 sq. m., and Car N. (49 sq. m.) is the most densely populated (4000). The best harbour is Nancowry, formed by Camorta and Nancowry, The cocca-nut is the principal tree grown though betal nate. tree grown, though betel nuts are also found. The fauna of the islands include monkeys, hats, flyingfoxes, tree-shrews, many varieties of birds and reptiles, and also of butterflies and insects. The inhabitants are a Far Eastern race, and speak varieties of the Non-Amman group of languages; their appearance is some-what repulsive, but the mental what repulsive, but the mental capacity of the best of them (natives of Car N.) is considerable. The religion is a form of animism; there is a Church of England missionary station the supervision of nativo under Indians.

Nicol, Erskine (1825-1904), a Scottish painter, born at Leith. He lived in Ireland from 1845-9, and returning to Edinburgh was elected a member of the Scottish Academy. In 1862 he best of which are seenes of Irish life and customs, include: 'Among the Old Masters,' Both Puzzled,' Paying the Rent,' The Trio, and 'Interviewing the Member.'

Nicol, John Pringle (1804-59), an astronomer, born near Brechin, and studied theology at King's College. Aberdeen. In 1835 ho was appointed professor of astronomy at the Glasgow University, having given up the study of theology for science. He wrote: Architecture of the Heavens; Solar System; and Dictionary of Physical Sciences.

Nicolai, a tn. of Silesia, Prussia, 110 m. S.E. of Breslau, with iron foundries. Pop. 8366. Nicolai, Christoph Friedrich (1733-

1811), a German aut hor and publisher, born at Berlin. In his youth he was a friend of Lessing and Moses Men-privy councillor. Ho wrote fables, deissohn, and in conjunction with epistles, elegies, narrative poems, etc. the former he established the famous Briefe, die neueste Literatur betreffend. Gradually he began to attack the romantic movement and critical school, and foolishly misrepresented the new movement of ideas represented by such great thinkers as Goethe, Schiller, Kant, and Herder. His works include: Description of a Trip through Germany and Swilzer-land: Anecdoles of Frederick II.; and a rationalistic novel, entitled Sebal-dus Nolhanker. See Göckingk's dus Nothanker. See Göckingk's Nicolais Leben, 1820. Nicolai, Otto (1810-49), a German

nusician and operatic composer, born at Königsberg. From 1841 to 1847 he was first kapellmeister of the Court Opera at Vienna, and was the founder of the Philharmonic concerts there. He produced several operas, all successful: the best known of which are The Merry Wives of Windsor, and

Il Templario.

Nicolaitans, an heretical sect twice named in the book of Revelations (ii. 6 and 15), where we learn that their works were hated of the Lord and the Ephesian Church, but tolerated and avowed at Pergamos. They are accused of sharing the teaching of Balaam, 'who taught Balak to cast a stumbling block before the children a stumbling block before the chudren of Israel, to eat things sacrificed to idols, and to commit fornication.' They seem, indeed, to have been an antinomian Guostic sect, excusing themseives by St. Paul's doctrine of Christian freedom. There are references to them in early church writers such as Jeanna Tartillian. writers-such as Irenœus, Tertullian, and Clement of Alexandria-and these writers frequently connect them with It has been Nicholas the deacon. suggested by some writers, however, that the seet did not exist, the reference in Revelations being merely

allegoriesi.
Nicolas, Sir Nicbolas Harris (1799-1848), a famous English antiquary and biographical writer, born in Corn-wail In 18.

the Heralds

Muscum.tant of his

torica, Proceedings and Ordinances of the Privy Council of England, De-spatches and Letters of Lord Nelson, Life of Chaucer, History of Agincourt, and an unfinished History of the British Navu.

Nicolay, Ludwig Heinrich Freiherr, Baron (1737-1820), a German poet, born at Strassburg. In 1769 he became preceptor to the Grand Duke Paul, later Emperor of Russia, and was afterwards appointed a director of the Academy of Sciences at St. Petersburg. In 1801 he was made a the German Constitution.

See P. von Gerschau, Aus dem Leben des H. L. Nicolay, 1834. Nicole, Pierre (1625-95), an eminent

French theologian and philosopher, born at Chartres. In 1644 he graduated from the University of Paris. He was a prominent member of the institution of Port Royal and an intimate friend of Arnauld. His most important work is a collection of treatises called Moral Essays and Theological Instructions. He wrote a Treatise on Human Faith and The Perpetuity of Faith in the Catholic Church concerning the Eucharist, the last in conjunction with Arnauld.

Nicolet, a tn. of Quebec, Canada, in

the co. of Nicolet, 20 m. N.E. of Montreal. Pop. 2600.
Nicoll, Robert (1814-37), a Scottish poet, born at Auchtergarvan, Perthshire. First poems printed, 1835. Edited Leeds Times, from 1836, successfully: but chiefly remembered as Scottish minstrel. Had lus life not been cut short, would probably have

attained great distinction. See P. R. Drummond, Biography, 1884. Nicoll, Sir William Robertson (b. 1851), a Scottish author and critle, born at Lumsden, Aberdeenshire. From 1874 to 1877 he was Free Church minister of Dufitown, and later of Kelso. He then came to London and edited the Expositor and British Weekly, which he continues to edit, together with the Bookman, established by him in 1891. Hls publications include: Literary Anecdotes of the Nincleanth Century, Letters on Life, Life of James Mardonnell, Life of Ian Maclaren, Emily Bronte, Songs of Resl, Professor Elmslic, The Church's One Foundation, The Expositor's Dictionary of Texts, etc. He also edited the complete works of C. Bronte, the Expositor's Greek Testanicat, and numerous theological works.

Nicol's Prism, see Polarisation of

LIGHT. Nicolson, Sir Arthur (b. 1849), an English diplomatist. In 1870 entered the Foreign Office, two years later assistant privato secretary to Earl Granville, 1874-76 third secretary to embassy at Berlin, 1876-78 second secretary to the legation at Pekin. 1879-84 second secretary at Constan-Has since been charge tinople. d'affaires at Athens and Teheran, consul-general at Budnest, agent lu Bulgaria, minister in Moroeco, nu-bassador extraordinary and plenipotentiary at Madrid, and ambassador to Russla 1905-10, since then permanent Under-Secretary for Foreign Affairs. Has published a History of

English prelate and antiquary, born in Cumberland. He occupied the sees of Carlislo and Derry, and finally rose to be Archbishop of Cashel in Ireland. His principal work was the Historical Library, consisting of English, Scottish, and Irish sections. He also wrote many sermons and antiquarian papers, and contributed a Glossarium '--' Collec-

B.C.), a was the

s patronised by Amyntas II., King of Maccdonia.

Nicomachus of Thebes (fl. c. 400 B.C.), a celebrated Greek painter, son of Aristodemus (q.v.), whose pupil he became. He is one of the most remarkable of the painters of antiquity. His skill is praised by Ciccro, and he was renowned for his rapidity of execution. cution. Among his principal works were 'Apollo and Diana,' The Rape of Proserpine, and 'Tynderidæ.

Nicomedes, the name of the first kings of Bithynia: Nicomedes I. began to reign in 278 B.C., and founded the great city of Nicomedia. He died c. 250 B.O. Nicomedes II. was sont by his father, Prusias II., as a hostage to Rome, where he found favour with the Roman senate, and later dethroned and killed his father and hecame an ally of the Romans. He died about 90 B.C. Nicomedes He died about 90 B.o. Nicomedes III., son of the preceding, succeeded his father in all his father in 91 B.C. He also was an ally of Rome, but was defeated and driven from his kingdom, which was, however, subsequently restored to Ho died in 74 B.c., leaving no issue, and Bithynia passed to the Romans.

Vicemedia, anancient city Bithynia, Asia Minor, the site of the modern Ismid, at the N.E. corner of the gulf of that name, an arm of the is the scat of

id the abode . Constantine, Pop. about

30,000. See Ismp.

Nicopolis (Bulgaria), see Nikopoli. Nicopolis (Gk., 'city of victory'), an ancient city of Epirus, Greece. It was situated on the Gulf of Arta, and was founded by Octavian to commemorate his victory at Actium in 31 B.c. Many Roman antiquities are to be seen on the site.

Nicosia, a tn. of Sicily, in the prov. of Catania, 14 in. N.E. of Castrogiovanni. The surrounding district is Nicosia has an altitude of nearly 3000 ft., and possesses a fine cathedral and several churches. Pop.

16,000.

Nicosia, or Lefkosia, the cap. of the l

Nicolson, William (1655-1727), an island of Cyprus and a Greek archbishop's see, near the centre of the great plain of the island, 25 m. N.W. of its port, Larnaca. The town presents a quaint, old-fashioned aspect, but is poor and mean. It has interesting memorials of former Venetian rule in the shape of its ancient cathedral and bastion walls. Textile goods and leather are the principal manufs. Pop. 16,500, mostly Turks. The British High Commissioner lives here.

Nicotine

Nicot, Jean, Sieur de Villemain (1530-1600), a French diplomatist, born at Nimes, where he received his early education. He afterwards went to Paris to complete his studies. 1560, during the reign of Henry Il.. he was sent as ambassador to Lisbon. On his return from Portugal he introduced the tobacco plant into France (hence the name nicotine). N. was the author of Historia Francorum and Le Trésor de la langue française.

Nicotera, a tn. of Italy, in the prov. of Catanzaro, 35 m. N.N.E. of Reggio.

Pop. 9000.

Nicotera, Giovanni, Baron (1828-94), an Italian statesman, born at San Biase, Calabria. He took part San Biase, Calabria. He took part in various movements of a revolutionary nature, fighting in Calabria and Rome, and in 1857 was taken prisoner at Sanza and condemned to the gallows. He was, however, set free in 1860 by the revolutionists and joined Garibaldi. Seven years later he commanded an expedition against Rome. In the parliament of the new kingdom of Italy he took a foremost part, and was at all times a supporter of Victor Emmanuel. He was Minister of the Interior in the first

Crispi cabinet, under Depretis (1876-77), and again in 1891-92, under Rudini. Nicotiana, a genus of plants (order Solanacew), a number of which are grown in the garden as half-hardy annuals. N. alba, the sweet-scented

tobacco plant, bears panicles of white funnel and star shaped flowers.

tabacum is the tobacco plant of commerce.

Nicotianin, the volatile oil to which tobacco owes its flavour. It contains four alkaloids: nicotine, nicotimine, nicotcine, and nicotelline.

Nicotino (C₁₀H₁₄N₂), an alkaloid found in the leaves of the tobacco plant in the form of the malate and citrate. It may be prepared by extracting the oil from the leaves with boiling water, mixing it with milk of limo,

treatod treated tracted

less oil, but rapidly turns brown on exposure to air. It boils at 241° and readily dissolves in water and

It has a pungent odour, alcohol. similar to that of a foul tobacco pipc. N. is exceedingly poisonous, a few drops in the stomach being sufficient to cause death, while is grain has been known to cause symptoms of poisoning.

Nictheroy, cap. of the state of Rio de Janeiro, Brazil, and an English residential suburb of Rio, on Rio de Janeiro Bay. The manufs. aro woollen and cotton goods, soap, tiles, tobacco, and spirits. Pop. 35,500.

Nictitating Membrane, or Third Eyelid, a structure well developed in birds, roptiles, some amphibians, and 'n mammals,

rudimentary

It is a thin semi-transparent membrane, which is drawn from the inner canthus obliquely upwards and backwards over the cornea. In birds it is most highly developed, being moved by two muscles, the bursalis and pyramidalis, both derived from the retractor bulbi and supplied by the abducens nerve. In reptiles there is only one musele, the bursalis; in tortoises and erocodiles the attached tendon develops into a second musele, the structure resembling that of birds.

Nidderdale, a picturesque valc of Yorkshire, situated in the W. Riding, traversed by the Nidd, which issues from the base of Whernside, and after a generally S.E. course empties into the Ouse near York.

Niddry, a vil. in the par. of Kirk-liston, N.E. Linlithgow, Scotland, 11 m. N.N.E. of Broxburn. Niddry Castle is famous as the place where Mary Queen of Scots spent the night following her escape from Lock Leven.

Nidwalden, see Unterwalden. Niebuhr, Barthold Georg (1776-1831), a German statesman and historian, born at Copenhagen, soa of the traveller, Karsten N. In 1810 he betraveller, Karsten 12 came royal historiographer and pro-fessor at Berlin, and by a course of lectures on Roman history estab-most

Rome uring and and. great

work on the topography of ancient Rome by C. C. von Bunsen and E. Platner (1773-1855). Ho resigned tho embassy in 1823 and settled at Bonn, where he spent practically the whole of the remainder of his life. Here he re-wrote and published the first two volumes of his Roman History, and tive of Lat. niger, black), the name delivered lectures on the French Re- of the method of decorations for volution, geography, ethnography, ornamenting a polished metal surand ancient history. The first two face by filling in inclsed lines with a

volumes were translated by Hare and Thirlwall, and the third (bringing the narrative down to the end of the first Punic War) by Smith and Schmitz. See Hensler's Lebensnachtrichten, and

Eissenhart's B. G. Niebuhr, 1886. Niebuhr, Karsten (1733-1815), a German traveller and author, born at Lüdingworth, Hanover. In 1761 he joined an expedition sent out by the King of Denmark for the scientific exploration of Egypt, Arabla, and Syria. He returned in 1767 as the solo survivor. In 1778 be accepted a position in the civil service of Holstein and weut to live at Meldorf. The result of his travels appeared in his Beschreibung von Arabien by Reisebeschreibung von und andern followed by Arabien Arabien und andern unitiegenden Ländern (1774-78), and Reisen durch Sprien und Palüstina (1837). See Life by his son, B. G. Nicbuhr (1817), Eng. trans. 1838, by Mrs. Austin, in the Lires of Eminent Men.

Niederhasslau, a vil. of Germany, in Saxony, 2 m. S.S.E. of Zwiekau.

Pop. 6474.

Niederplanitz, a vil. in kingdom of xony, Germany, 2 m. S.W. of Saxony, Germany, 2 m. S.W. of Zwickau. Pop. 12,383. Nieder-Schöneweide, a tn. of Bran-

denburg, Germany, on the Spree, 5 m. S.W. of Berlia. Pop. 7259.

Niederschönhausen, a tn. of Prussia, prov. of Brandenburg, 4 m. N. of Berlin; has an ancient royal residence.

Pop. 15,573. Niederwald, a mountain ridge iu the Prussian dist. of Wiesbaden, crowned by the German national monument (creeted in 1883) In commemoration of the re-establishment of the empire. It is on the r. b. of the Rhine, opposite Bingen, between Rudeshelm Assmannshausen, and has an elevation of about 1150 ft, above sealevel, 900 ft. above the Rhine. The summit is approached by a eog-wheel rallway.

Niel, a com. of Belgium, In the prov. of Antwerp, 9 m. S.W. therefrom.

Pop. 8100.

odern

Niel, Adolpho (1802-69), a French marshal, born at Muret, France. He served in Africa, and distinguished himself at the capture of Constantine In 1837. In 1849 he was engaged in in 1557. In 1849 he was engaged in the siege of Rome; took the Malalhoff near Schastopol in 1855, and three years later published Siège de Schaelopol. He again distinguished himself in the battle of Solferino, 1859, when Napoleon III. made him marshal. N. was appointed Minister of War in 1867.

Niello Work Ut ministers distinctions

Niello Work (It. nigellum, dlmlnu-

black metallic amalgam, which has he joined Mensieur Daguerre in his been practised from very early times, work.

up to the present day. The method is his membergia, a genus of harly and briefly as follows: The design rehalf-hardyaumaland premainly half-hardyaumaland premainly half-hardyaumaland premainly half-hardyaumaland revenuable for a graving tool, a solution of borax of creeping habit sand are valuable for applied to serve as a dux, and the the rock garden. They need an amalgam shaken over it; it is then abundance of moisture.

Nierembergia, a genus of hardy and are nearly solutions of the process of the pr amalgam shaken over it; it is then abundance of mosture, heated and fresh amalgam added as Nierstein, a vil. of Germany, in the required. The surface is then scraped grand-duchy of Hesse-Darms' adit, on smooth and polished. The amalgam the Rhine, S.m. S. of Mainz. The is made np of silver, copper, and lead, town is specially no ed for the Nierentowhich powdered sulphur is added; when brittle it is pounded up and placed ia quills. The earliest speciments of N. W. date from Bonna 1900us of Germany, philosopher 196 when brittle it is pounded up and placed in quills. The earliest speci-mens of N. W. date from Roman times, and from then until the

great measure by N. W. Nielsen, Yngvar (b. 1843), a Nor-wegian writer, born at Arendal, Among his works are: a Guide to Schwedisch-Norwegische Union, 1895. He was director of tho ethnographical museum at Christiania in 1878, and became professor at the university there in 1890.

Niembsch (or Niemsch). Nikolaus von Strehlenau, see Lenau, Nikolaus. Niemcewicz, Julian Ursin (1757-1841), a Polish scholar and statesman, born in Lithuania. Ho served for a short time in the army and became acquainted with Koschisko, with whom he was taken prisoner at the battle.

1794, and d President mmittee in

of Vienna. are the most popular, but he also wrote: The Return of the Deputy, a comedy; John of Tenceyn, a hovel in the style of Scott; and a History of the Reign of Sigismund III. (3 vois.), 1819.

Niemen River (Russia), see MEMEL. Niemes, a tn. of Boherala, Austria, on the R. Polzen, 42 m. N.E. of Prague. It has manufs. of cloth. ilnen, bentwood furniture, and vinogar, and contains a castle of the

1900), a German philosopher. aristocratic Polish ex raction, he was 16th century the art was continually born at Rocken, near 1.4 zen, ins practised in various countries, whilst father being a clergyman. After a in Russia and India it has survived brilliant university career at Bonn to the present time. The invention and Leipzig he was appointed at the of printing from engravings on metal age of twenty-four, professor of Greek plates was undoubtedly suggested in at Bâle. This post he resigned in great measure by N. W. 1879 owing to lithealth, red fring on Mielsen, Yngwar (b. 1843), a Nor- a pension of £120. In 1889 he went Norway, which has been translated in Naumburg. To these few blograminto English; Norges Histoire ofter phical details must be added (for it is 1814, 1885-91; Freden of Kiel, 1886; the key to unch in his philosophy) and Der Vertrag von Moss und die the fact that his life was une lone Schwedisch-Norwenische Union 1884. mad, and after remaining so for eleven strugglo against stokness; neuralgia and insomnia being its principal manifestations. N.'s philosophy can be expressed in a few words. He regarded immanity as being composed of two types fundamentally different from each other; the weak and the strong, the slavish and the masterful, the mob and the aristocratic few. In the struggle between these two types each would naturally seek to impose its morality on the other and to de-preciate those qualities in its oppo-nent that are dangerous to it. Thus the weak commend the qualities of ond the same expension. Excusion Because meokness and poverty and remmola lon. Christlanity (which, as N. significantly poin's out, arose among the stave population of Rome) extelled this stave morality, he was opposed to t and proclaimed himself An Ichrist. He would rovalue all values in the light of the morality of the strong. And for mankind he held up the ideal of surpassing Itself, the need for erenting a higher, stronger, and more dominant ruce, the Ucbermensch, the Superman. These ideas are set forth with much powerfui oloqueneo in his maay Counts Hartig. Pop. 6217.

Niepee, Joseph Nieóphore (1765Niepee, Joseph Nieóphore (17651833), a physicist and an lavontor of photography, born at Chuloas-anr Saôno. From 1795-1801 ho was administrateur of Nico, whon he returned to his native pinco and ministrateur of Nico, whon he returned to his native pinco and directed his energies to chomical duction to and summary of N.'s research. In 1811 he turned lile attention to lithography, and in 1820 in Oulline and Aphorism (Fonlis).

Nieuburg: 1. A tn. of Prussia, in cattle and the rearing of sheep and the prov. of Hanover, on the Weser, 30 m. N.W. of Hanover. The chief industries are the making of glass, spirits, and biscuits, and the manufacture of manures. 2. A tn. of Germany, in the duchy of Anhalt, on the Saale, 20 m. from Magdeburg. There are sugar factories, iron foundries, breweries, and tanneries. Pop. 5573.

Nieulandt (Nieulant, Nieuwland, or Nieuwelandt), Willem van den (1585-1635), a Dutch landscape painter born in Antwerp. He established himself at Amsterdam, where he was much employed in painting views of the ruins of ancient architecture in the vicinity of Rome, from the designs he had made during a residence in Italy. He etched in all about sixty plates of landscapes and ruins.

Nieuwer Amstel, a com. of the Netherlands, in the prov. of N. Hol-land, 5 m. S.W. of Amsterdam. Pop.

Nieuwland, Pieter (1764 - 94), Dutch poet and mathematician, born near Amsterdam. He was professor at Utrecht, occupied the chair of natural philosophy at Amsterdam, and in 1792 became professor of 1792 became professor of mathematical and physical science at Leyden. His Poésies hollandaises (1788) contain some fine pleees, among which may be mentioned the poem Orion and the elegy on the death of his wife. His scientific works include Almanach nautique, with Van

1789; L'art de la navigotion, 1793. Nieuwpoort, a tn. and watering-place of Belgium, in W. Flanders, on the Yser, 10 m. S. of Ostend. Good bathing is obtained, and the cod and herring fisheries are important. Pop.

3500. Nieuwveld, a mountain range of Cape of Good Hope, S. Africa, be-tween lat. 32° and 33° S., with an

elevation of 7000 ft.
Nièvre, a dept. of Central France, formed mainly out of the old province of Nivernais with a part of Orléanals. It belongs to the basins of the Loire and Seine, and has an a sq. m. The surface is ru E., comprising part of t mountains of the Morvan,

horses being important agricultural industries. The chief cereals are oats and wheat, but potatoes are largely cultivated. Vines are grown in the valley of the Loire and in the neighbourhood of Clamecy, the white rights of Pavilly before former. wines of Pouilly being famous. principal mineral is coal, which is found in the ueighbourhood of Decize, and the chief manufactures are iron and steel at Guérigny, Fourchambault, and Imphy. The capital is Nevers. Pop. 314,000. Niewo Diep Harbour, see Helder.

Nigdeh, or Nigde, a in. of Asia Minor, in Konia, 68 in. N.N.W. of Adana. Pop. 20,000.

Niger, or Quorra (Kwara, Kowara, etc.), an important river system of W. Equatorial Africa, ranking next in size to the Congo and the Nile. It rises in the country of the Mandinges, about 150 in. from the coast, and flows N. and N.E. towards the Sahara, then S.E. and S., finally entering the Bight of Benin in the Gulf of Guinea by an of Benin in the Gulf of Guinea by an enormous delta (14,000 sq. m. in area), which extends nearly 150 m. inland. Its chief stream, the Tembi, is joined by the Tamincono and the Falico, all rising in the mountainous region of N.E. Slerra Leone. Lower down, at its confluence with the Tankisso, it is called the Bahaa or Joliba. At Bammaku in Bambarra it becomes navigable for steamers, and after passing Sansanding it divides into several arms, enclosing extensive islands. From Kahara divides into several arms, cheasang extensive islands. From Kahara (port of Timbuctu) it passes along the desert towards the frontlers of Houssa, and is called the Kwara, Kloora, or Mayo, and further S. the sea or lake of Nupo (Nyffe). The N's chief left-bank tributary, the Benuo or Chadda (n.r.), joins it opposite Lokoja, and being navigable from Adamawa affords communica-Swinden; Dissertations sur la con-struction des octants de Hadley et sur la détermination des longitudes en mer par les distances de la lune au soleil et aux étoiles fixes, 1788; Discours sur les moyens d'accélérer l'art noutique, from Adamawa affords communica-The Bussa tion with the Interior. rapids, in which the explorer, Mungo Park, was drowned (1805), are below the junction of the Sokoto and the N., 1 than those The chief s the Nun. es are tho Sombrero, Opoho, etc. Total length about 2600 m.; area of basin 600,000 sq. in. frensts form the chief vegeemarkable delta region. was explored by Mungo and 1805), the Middle mountains of the Morvan,
highest point within the
is Préneley (2790 ft.), but
where the calcareous formations predominate, the highest point is 1400 ft.
Forests cover large areas, but much forests cover large areas, but much formation of forage, the fattening of the formation of forage, the fattening of the formation of forage, the fattening of the formation for the formation of forage, the fattening of the formation for the formation of forage, the fattening of the formation for the forage of the fattening of the forage.

Niger, Gaius Pescennius, governor of Syria, was a Roman of equestrian rank. He was chosen emperor by the troops in 193 A.D. on the death of Commodus; but, failing to march on Rome at once, was intercepted by Severus, a rival claimant. Three battles were fought, resulting in the defeat of Pescennius, who fied towards the Euphrates. He was captured and

put to death, 194 A.D.
Nigeria, a territory of British W. Equatorial Africa, ahout 333,000 sq. m. in area, extending between the Lower Niger and Lake Chad. Its boundaries were settled by various agreements with Germany (1893) and France (1893). The Anglo-French agreement (1904) and the Conven-tion (1906) fixed as the N. boundary French Sudan from Barua on Lake Chad to the Niger, 10 m. N. of Illo. The W. houndary is the French territory in Dahomey, S. como the Gulf of Guinea and the Atlantic, and E. the German Kamerun and Adamawa and the region stretching up to Lake Chad. The country is usually divided into the dolta region (swampy and unhealthy and abounding in mangroves), the forest region (very hilly in parts), and the plateau region in the centre, where the climate is much drler. Grain is extensively grown, and the Bassia Parkii (sheabutter tree), cotton, and indigo are extensively cultivated. Tornadoes and cyclones are met with in the N. aud N.E., and the hamattan blows from the Sahara. Malaria, leprosy, and oplithal nua are common diseases. Pop. about 17,750,000. Since for administrative purposes the country is divided into the districts of Northern and Southern N., it will be con-venient to treat the trade, mineral products, industries, etc., of these

districts separately.

Northern Nigeria.—The Protectorate of Northern N. was constituted (Jan. 1900) over territories which belonged before to the Royal Niger Co., Ltd. (incorporated 1886). It includes the old Fulah empire, with its Hausa states, and the territories of Bornu, Kano, and Sokoto were acquired 1900-3. There are

See Thomson, Mungo Park and the Niger, 1890; Mockler-Ferryman, Up Kano, and Zaria. The Middle and the Niger, 1893; Leonard, The Lower Lower Niger and most of its large Niger and its Tribes, 1906; Trotter, tributary, the Benne, lie in this The Niger Dolta' in Proc. R. G. S., Cando, Sokoto, Kano, Bida, Bauchi, Coveries in Niger and Central Africa, in The government headquarters are at iv.-v., 1857-58; Lenfant, Le Niger Zungeru on Kaduna R. There are "1903; Boyd Alexander, From the Niger to the Nile, i., 1907.

Niger, 1890; Mockler-Ferryman, Up Kano, and Zaria. The Benne, lie in this The Niger Sources, and Discoveries in Niger and Central Africa, Illorin, Vola, and Maifoni. The government headquarters are at iv.-v., 1857-58; Lenfant, Le Niger County C corn, wheat, ground-nuts, shea-hutter, etc., being grown. Palm-kernels and oil, indiarubber, cotton, ivory, drugs, capsicums, gums, bal-sams, indigo, hides, and tobacco are also produced. There are salt and soda deposits in Bornu province. Iron ore, tin, and silver are found besides. Citrons, limes, oranges, datepalms, pomegranates, mangoes, and other fruits flourish. The Niger Co., Ltd., carry on most of the trading, banking, and mining operations of the country. They also superintend the working of the forests, and the tobacco and other plantations. The military force is composed of the 1st and 2r

Infantry Frontier

Yorubas), numbering about 3600. There are 177 European officers and non-commissioned officers. A light railway runs from Baro on the Niger to Zungeru, Zaria, and Kano, and connects at Minna with the Southern Nigerian Railway, opened 1909, from Lagos to Jebba, and extended later. Palm-kernels. palm-oil, indiarubber. rum, and hides are some of the cluef exports. The revenue (1910-11) amounted to £274,989, excluding £70,000 contributed from Southern N., and an imperial grant of £275,000. The expenditure was £565,760. Area about 256,400 sq. m. Pop. about 10,000,000.

Southern Nigeria,—The old colony and protectorate of Lagos and the protectorate of Southern N. were united as the Colony and Protectorate of Southern N. by Royal Letters Patent (1906), with Lagos as the seat of government. The protectorate contains three provinces—Western or Lagos province (including the 'colony'), Central province, and Eastern province, and occupies the Eastern proviuce, and occupies the whole of the delta region. There are resident officers at Ibadan and clsewhere in the interior, and a European commissioner at Abeokuta in the Egba government. The headquarters of the Central province are at Warri, of the Eastern province at Calabar. The chief ports include Lagos, Burutu, Foreados, Degema, Bonny, Opobo, and Calabar. Other important towns are Badagri, Jebu Ode, Ondo, Shaki, Benin City, Onitsha, and Brass. The were acquired 1900-3. There are and Calabar. Other important towns thirteen provinces (each under its are Badagri, Jebu Ode, Ondo, Shaki, own president): Sokoto, Kontagora, Benin City, Onitsha, and Brass. The Nupe, Illorin, Kabba, Bassa, Nassa Niger Coast Protectorate (formed

is another cable station at Bonuy. Thero is a weekly mail-service be-tween Liverpool, Forcados, and Caiabar, vià Lagos. The military force here is composed of the Southern Nigerian regiment of the W. African Frontier Force. Hardware, earthenware, textiles, and tobacco are ware, textiles, and tobacco are among tho imports, palm oil and kernels, ivory, rubber, and gun arable among the exports. The revenue (1910-11) was £1,956,176, the expenditure £1,717,259. The present governor and commander lu-chief of the whole of N. is Sir F. Lugard (1913). The fauna and floration of N. are interesting and deserved the control of N. are interesting and deserved. of N. are interesting and deserve some mention. Lions, icopards, ele-plants, giraffes, a kind of buffalo, hymnas, antelopes and gazelies, camels, monkeys, and snakes are found. The rivers contain numerous varieties of fish, while the crocodile, the rhinoceros, and the hippopotamus are also common. The tsetse-fly and mosquitoes jufest the coast districts mosquitoes infest the coast districts majority of these plants hear showy and all the deita region. The birds include ostricles, bustards, birds of tree yellow, plnk, or blue have prey (such as vuitures, kites, and their texture such that they are conlawks), snlpes, qualis, partridges, spicuous in the lighter hours of the ducks, widgeon, and teal, and many summer night. The commonest instance among wild plauts is the white etc. Among the chief trees are different kinds of palm (notably the oil-palm, Elwis guineensis; the datepalm, Phænix dactylifera; and the Doum-palm, Hyphæne thebaica), the gambier, the baobab, shea-butter. Doum-palin, Hyphane thebaica), tho gambier, the baobab, shea-butter, and locust trees, and the tamerind. In the drier regions mimosa and cacaie bloom freely. Mangroves are confined to the swampy coast district and form its peculiar vegetation. The vast number of tribes in N. provents any detailed account, but a few of them may be mentioned. Among the coast-tribes are the Jekri, Ijos, Ibos, and Aros; to the file. The tree of sadness, the marvei of Peru, the night-blooming Jekri, Ijos, Ibos, and Aros; to the file.

Nigeria 538

Night about 1844), known till 1893 as the Oil Rivers Protectorate, formerly held sway in this region. There are rubber, eoeoa, coffee, and cotton plantations. Palm-oil, palm-kernels, copal, ivory, gum, fruits, hides, and grains are produced. Much mahogany is exported. Calabar, Oloko-Aleji, and Onitsha all have botanical stations. The cluid native industries are olether of the received native industries are necessarily bound to be effected before long, the way. For a statement and canoe-building. The received native is successionally and the way. For a statement of the N. are much higher races than these coast-dwellers, and these coast-dwellers, and these coast-dwellers, and the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers of the Northers o Night Rudard 1896, Nigeria, 1909; Johnston, Colonisation of Africa, 1899; Koltie, The Partition of Africa (2nd ed.), 1895; Morei, Affairs of West Africa, 1902; Partridge, Crow River Natires, 1904; Lady Lugard, A Tropical Design 1904; Lady Lugard, A Tropical Dependency, 1905; Larymore, A Resident's Wife in Nigeria, 1908; Hazzledine, The White Man in Nigeria, 1904; Leonard, The Lower Niger and its Tribes, 1906; Calvert, Nigeria and its Tin-fields, 1910; Falconer, Geology and Geography of N. Nigeria, 1911; Annual Reports; and Nigeria, Our Latest Protectorate (London), 1900. Niger Territory (French), see Senegal, Upper, and Niger.

Night-blooming or Noctiflorous Plants are plants which have

Plants are plants which have adapted themselves so as to gain the fertilising services of moths and a few other nocturnal insects. All of them are strongly seented and most very fragrant, and on that account are valued in the garden. The majority of these plants hear showy

British nightjar. See GOATSUCKER.

Night He genus of bird of very wide most active

species, N. griscus alone visits Britaln, but its nearest breeding quarters are in Andalusia and Hun-gary. Attempts, however, are heing made to reintroduce the species to Holland. The nests are made in trees and its plumage is beautifully colonred, the back being greenish-olive and the breast wine colour; long white plumes are borne on the head. This hird is held sacred in China.

Nightingale (Daulias or Molacilla luscinia), the most famous of the warblers, or indeed of any song birds. The male bird arrives from Northern Africa in the middle of April a few days before the female, going almost invariably to the woods and copses which have always been the haunts of its species; but the distribution is very local, being confined to the southern midland countles, and though sometimes found in the W. The N.'s song on a calm night in May or June has a perfect setting; but it is impossible to exaggerate the beauty of its melody, combining as it does tho finest :

Contrary to can be hear night-time.

the ground, of dry grass and leaves, and in it are laid four to six olive-green eggs. The male's song conthucs until the young are hatched. The female is slightly smaller than the male, but exhibits no definite distinction of plumage. The upper parts are chestnut-brown; the long rounded tall is reddish brown, and the breast is dull greyish white, tinting to brown. The food is mainly composed of caterpillars, other inseets, and small worms; but fruit is to unload the liver and bowels, and sametimes eaten. The winter migra- a mustard foot-bath before going tion is begun as early as July, and is to bed will often prove of material eampleted before the end of August.

Ns. arm sometimes text in continuous. Ns. ara sometimes kept in captivity, but need much careful management. D. philomela, the thrush N. of Eastern Europe, is a louder but not such a sweet songster. The Indian N. is Kittacincla macroura.

of a good family at Florence.

Nighthawk, another name for the tion of the Protestant Deaconesses at Kaisorswerth, on the Rhine, and on her return to England devoted herself to the Governesses' Sanatorium in eonnection with the London Institute. At the beginning of the Crimean War the wounded soldiers suffered so terribly from the lnefficlency of the nursing department that Florence N. volunteered her services and sailed with thirty four nurses in 1854. Her self-sacrificing services near water; the eggs, from three to to the wounded made her name fam-five in number, are pale in colour ous throughout Europe. She wrote and are elongated and pointed at several pamphlets on nursing, and a both ends. The bird is 23 in. long, fund, whose interest amounts to £1400 per annum, was raised for the purpose of training nurses, now carried out at St. Thomas's and at King's College Hospital. See Life by Miss Tooley (1904).

Nightjar, see GOATSUCKER.

Nightmare, or Incubus, a condition which is characterised by an abiding sense of discomfort and uneasiness, occurring in the midst of a disturbed In ancient times and in the alcep. middle ages this state was believed to be produced by demous which the Romans called 'incubi,' but it is now generally associated with the taking of a heavy meal or of ludigestible food before going to sleep. A closely allied condition, however, is apt to bo met with as a consequence of brain exhaustion in those who are over-worked either by application to study or in the pursuit of business. Neryous people are the most susceptible to nightmare, and especially is this the case with regard to children, who experience dreadful night terrors after a day of unusual excitement or fatigue or after partaking of some food. indigestible Children suffer in this way should be guarded from becoming over-excited or overfatigued, and should not be allowed to eat any food for several hours before going to bed. They should also have a tonic treatment, and live in the open air as much as possible. Aperient medicine should be given Nightshade, a name given especi-

ally to a number of plants of the order Solanaeee. The deadly N. (Atropa belladonna) is the most dangerous of British poisonous plants. Every part of the plant has the poison-Nightingale, Florence (1820-1910), ous principle, atropin (q,v). The the reformer of hospital nursing, born berries are large and black, and, exof a good family at Florence. While copt for the persistent calyx, resemble quite young, she did much philan; eherries; they are often mistaken for thropic and social work in England, an edible fruit by children with fatal and in 1844 visited many hospitals results. It is a stout, erect plant, and reformatories in Europe. In 1851 3 or 4 ft. tall, with large ovate leaves she trained as a nurse at an institu- and solitary drooping bell-shaped Nigra

not common. Frequently mistaken for it are the woody N., or bittersweet (Solanum dulcamara), a common twining plant in hedges with drooping clusters of purple flowers with yellow anthers, and the black N. (S. nigrum), a small upright plant with drooping white flowers with yellow anthers. These also are poisonous, and frequently cause loss of livestock. Enchanter's N. is Circa lutetiana (order

Onagraceæ). Nigra, Constantino, Count (1827-1907), an Italian diplomatist, who carried on the traditions of Cayour for more than forty years, was born in Castelnuovo, Torea Italy, and studied law at the Turin University. At the outbreak of the Austrian War (1848) he culisted as a volunteer, and in the battle of Rivell was severely wounded. In 1851 he entered the diplomatic service and became secrotary to Cavour, whom he accomhe was for many years minister plenipotentiary in Paris, then am-bassador in St. Petersburg (1876), London (1882), and Vienna. He edited popular Italian songs, edited He the correspondence of Cavour and Comtesso de Circourt, and was an authority on the Gaelic language and

literaturo. Nigritia, see SUDAN. Nihilism (Lat. nihil, nothing), as a philosophic term is as old as tho twelfth century, and may be said to signify that sceptical attitude of mind which denies everything, even exist-ence. In recent times, however, N. has come to stand for an amorphious body of social and political discon-tent which manifested itself among the Russian educated classes. the fact that in so far as N. was given a political direction It aimed at a reconstruction of society on a com-munistic basis, and as in order to attain that end Nihilists have not scrupled to use the most violent means, N., in the popular mind, has became a synonym for anarchism (q.v.). But the great bulk of Nihilists in Russia tako no part whatever in the political struggle, and are content to devote their energies to such matters as education, the raising of the status of women, etc., and to making known their ideals through the channels of literature and art. During the last decade or two the term N. has be-

flowers, purple in colour; happily it is of the 19th century, however, the term was a useful one under which to class all rebels against a reactionary and oppressive autocracy. struggle between the police and tho Nihilists has been marked on the one hand by vigorons, rigorous, and often extra-indicial repression, working by means of secret police, courts-martial, imprisonment, Siberian exile, and the gallows, and on the other hand by robbery of banks, etc.-enphemistically termed 'expropriation'-assassinations and other methods of terrorism, all planned by secret terrorism, all planned by secret societies. Side by side with this has societies. come a very strict censorship of books and newspapers, which has been to some extent met by the copious outpourings of secret printing presses. Thus tho history of N. has largely become the history of modern Russia. The most notable assassination of the Nihilists is that of Tsar Alexander II. by bombs on March 13, 1881. See Stepniak, Underground Russia, and Nihilism as it is; Princo P. Kropot-kin, Memoirs of a Revolutionist, and The Terror in Russia. See also

Russia-History. Niigata, an open port of Hondo, Japan, 160 m. N.W. of Toklo. Tea is grown throughout the district, and there is a large junk trade, but being obstructed by a sand-bar the har-bour is not entered by European craft. The production of petroleum has been developed, and there is a large manufacture of lacquer-ware. Pop. 62,000.

Nihau, one of the Sandwich Is, situated to the W. of Kanai, from which it is separated by the Strait of

Kaulaka. Area 120sq.m. Pop. 21,000,
Nijar, a tn. of Spain in the prov. of
Almeria, on the R. Artal, about 6 m.
from its mouth. Wheat, fruit, and
olives are grown; and lead, Iron, and mnnganese are obtnined in the distriot. The manufactures are weetlen and cotton goods and porceisin.

Pop. 15,000.

Nijherek, or Nykerk, a tn. of the Netherlands in the prov. of Gelderland, 18 m. N.E. by E. of Utrecht. Pop. 8528.
Nijni-Novgored, or Nizhniy-Novgored:

1. A gov. of Central Russia, situated on both banks of the Volga, two-thirds being on the right and one third on the left. The surface Imostly flat, with forests, marshes, and lakes, with limestone hills in some decado or two the term N. has bolleaded or two the political receives a political ere.

In the political receives the political ere.

In the december of progressive tendencies may be a Constitutional Democrat, a Socialist, an Anarchist, and so forth. In the latter half province, and the timber industry is important. There are machinery and outlery works, tanneries, flour mills, naphtha distilleries, etc., aud a considerable trade in manufactured articles, corn, flour, hemp, etc. Ship-building is also carried on. The government is divided into eleven government is divided into eleven districts. The chief towns, besides the capital N., are Pavlovo and Pochinka. Area 20,000 sq. m. Pop. 1,999,300. 2. A city of Russia, cap. of the abovo prov., situated at the confluence of the Oka and tho Volga, 276 m. by rail E. of Moscow. Its position is excellent from a commercial point of view as cereals and reconfluence. of view, as cereals and manufac-tured articles from the Oka hasin, metal goods from the Kama basin, tea from Siberia, and corn, salt, naphtha, cotton, etc., for transit on the Volga, must all pass through the The city may be divided into three parts, the upper town, the lower town, and the fair town. The lower town, and the fair town. The upper town contains the Kremlin, situated at the height of 400 ft on the right bank of the Volga; it is surrounded by a high wall, and has the principal edifices, including the governor's palace and two cathedrals. On the left bank are monasteries and an old church. The lower town is the the chief centre of steamboat navigation on the Voica, and has manufactures of ropes, candles, and machinery, and distilleries, potteries, and flour mills; ship and steamboat building is also carried on. The trade of the city is more important than the manufactures, and the celebrated manufactures, and the celebrated Makarievskaya, or fair, which is held here from July 29 to Sept. 10, is a most important event, as the opera-tions which are carried out influence all the leading branches of Russian manufacture. The corn and salt trade of Siberia and Turkistan, in particular, depends upon the condition of credit which the merchants obtain there. About 400,000 people visit the fair, which has been held at N. since 1817, and the business transacted there has been valued at 435,000,000

\$36,000,000. Pop. 92,273.
Nike (Gk. \(\verticat{\text{pix}}\), in Greek mythology, the goddess of victory, and according to Hesiod, the daughter of Pallas and Styx, by whom she wassent Pallas and Styx, by whom spewassent to fight on the side of Zeus against the Titans. She is generally represented as winged, and with a wreath sand a palm-branch. As herald of victorial and a palm-branch wand of Hermes. tory she also has the wand of Hermes.

Nikki, a tn. in Borgu, Africa, about

Nikko, or Hatsiisi, a tn. of Hondo, Japan, 80 m. from Nilgata. It is one of the chief religious centres of the country, and is much visited on account of its fason temples and the country and sanotheries of the first. sepulchres and sanotuaries of the first and third shogun of the Tokugawa dynasty.

Nikolai, see Nicolai.

Nikolaistad, or Vasa, chief tn. of the gov. of Vasa in W. Finland, on the Gulf of Bothnia, 327 m. from Helsingfors. It was rebuilt after the great fire of 1852. It has a considerable export trade. Pop. 20,000.

Nikolas of Cusa, see Cusa.

Nikolayev, a tn. and the chief naval station of Russia, on the Black Sea, 41 m. N.W. of Kherson. There are immense shipbuilding yards, and a floating death for the hips. N. has also strong the hips. N. has also strong the hips. It is and machinery the hips. A. hips. It is and machinery the hips. manufactures soap, tobacco, vinegar, carriages, and agricultural implements. It is the chief port for the export of cereals from the most fertile governments of S.W. Russia. Pop.

95,400. Nikolayevsk: 1. A tn. of Russia in many wurchouses, depositories, etc. There is trade in cereals, the principal many wurchouses, depositories, etc. On the flat saudy peninsula between industries being agriculture and the the Oka and the Volga, connected with the town by a wooden bridge, the great fair is held. The quarter prov., on the Amur, 23 m. from its entraine 3000 shops, whilst as many specific strade in the Pacific. It importance into the Pacific. It importance with the province of the province of the province of the province of the pacific strade in the principal and the province of the principal and the province of the principal and the princ the gov. of Samara, on the Irgiz. There is trade in cereals, the principal industries being agriculture and the entrance into the Pacific. It imports procery, spirits, and manufactured goods. Pop. 8500, 3. A on. of Russian Poland. See Sosnovite. Nikolayevskaya, a tn. of Hussia, in the gov. of Astrakhan, on the Volga. celebrated for its trade in corn and salt. Pop. 18,000. Nikolabur, or Mikulov, a tn. of Victic in Voranti, 26 m. S. of British P. L. C. teau of Prince Detrickston-Mendorff which con-

Dietrichstoin-Mensdorff, which contains a very fine library. The pre-liminary treaty of peace between the Prussians and Austrians was signed here in 1866. The principal industries are viticulture and the manufacture of clotb, but there is also trade in lime and limestone. Pop. 8300. Nikopol, a tn. of Russia in the gov.

Ekaterinoslav, on the Dnieper.

Pop. 8000. Nikopoli, or Nicopolis, a fortified tn.

of Bulgaria, on the Danube, 24 m. N.N.E. of Plevna. The town was the scene of the defeat of Sigismund and his hosts in 1396 by Bayezid I., and was captured and burnt by the Russians under Krüdener in 1877. The chief industries are tanning and fishing. Pop. 6000. Nikosia, see Nicosia. Niksar a tn. of Aslatic Turkey, in

the vilayet and 60 m. N. of the tr. less than a mile in Nubia to as much of Sivas. Close by is the village of as 12 m. in Upper Egypt, and it is

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pens of the above-named men. great literary, scientific, and political clientèle Knowles took with him to his new venture, the Nineleenth Century, with the new

temporary Re-. als biographer. Sir Sidney Lee (Dictionary of National

Biography), the members of the Metaphysical Society continued to support Knowles. The power of the review in matters of public importance was amply demonstrated by the abandon-ment of the proposed Channel Tunnel Scheme of 1882 which, according to Gladstone, was the consequence of the imposing array of denunciatory articles in the Nineteenth Century. It continues to maintalu a high level of critical power in matters appertaining no less to art than to politics, but especially social and economic Present cditor: Mr. W. matters.

Wray Skilbcek. Nineveh, the ancient cap. of the Assyriau empire, was situated on a piece of land which lay between the rivers Husur, Gomal, Upper Lab, and Tigris. It occupied about 1800 aercs, and formed a long narrow strip along the Tigris, pierced at right angles by Of its origin nothing is the Husur. certain; but it was probably founded from Babylon by Nimrod, along with Calah, Rehoboth-Ir, and Resen. mentioned by Khammurabi B.C.), and Shalmaneser I.,

'zikati' inscriptions, about 1300 records his restoration of the ter of bу At the ter behammed been a poor place, the Granpians. See Bedo, Hist. with few buildings, and very badly Eccles.; and Ailred of Rievaulx, Life supplied with water; but he altered of St. Ninian Ailred

The words 'and after were all this. He built a large palace, 'the grandest architectural effort of Assyria,' and an arsenal for milltary supplies, laid out a fine park for hinting and as a pleasure ground, and erected a magnificent 'triumphal way' 62 cubits broad. He also conducted water from the hills by eighteen canals into the Husur, and distributed its waters round the mouts into the ponds and tanks within the city. Besides this ho made N. his court residence, and after the destruction of Babylon it was probably the finest and richest city of the East. Esarhaddon, however, did not make N. the metropolis of the empire; but Assur-bani-pal rebuilt the temples, and a palace for himself which was adorned with some beautiful sculptures, and contained a famous library full of the classles of Babyloniau literature. After this, little is known of the fortunes of the city, except that it was captured by the Medes in alli-ance with the king of Babylon about 606 B.C. The mound of Kurjunjik marks the site of the palace of Sen-

marks the site of the phase of sen-nacherib and Assur-bani-pal.

Ning-po (Ning-po-fu, city of the calm waves), fornerly Liampo, a treaty port and important trading city of Che-kiang prov., China, on Takla or Ning-po R., 16 m. from its mouth opposite Chu-San, and 95 m. from Hang-chow. Manufactures include silks and other fabrics, gold sliver, and lacquered wares, carved wood, furniture, carpets, and confections. Tea, raw cotton, drugs, and straw goods are among the exports. Bamboos and rice are grown. Thero are salt works and fisheries near by. The ruined Pagoda or Obelisk (T'ienteng-t'a) and the old Drum Tower are interesting buildings. N. contains numorous temples (e.g. that of 'the Queen of Heaven'), monasteries, schools, and clubs, and a fige library. It is noted as an important missionary centre. There was a Portuguese settlement from 1522-45. A British occupation took place in 1841-42, and in the latter year the port was opened to foreign trade by the Treaty of Nankin. It serves as a distributing station for Shanghai. Pop. (1911) Pop. (1911) estimated at 350,000.

Ninian, Saint (d. 432?), a missionary u Strathelyde. l was ordained Picts by Pope ded the church

lthorn, ln Wigen built townshiro, and dedicated it to St. a con- Martin of Tours. According to Bedc, he preached Christianity to the Piets

LENCLOS. Ninove, a tn. of Belgium, in the prov. of E. Flanders, on the R. Dender, with manufs. of gloves, lace, and sewing cotton. Pop. 8200.

Ninth: 1. An interval in music, which contains an octave and second. 2. It is also used of a chord which consists of the common chord, with the eighth advanced one note.

Niobe, the daughter of Tantalus, and wife of Amphion, king of Thebes, according to Greek legend. Her pride in her twelve children caused her. in Homer's story, to scoff at the goddess Lcto, as mother of Apollo and Artemis only; Leto's children slew N.'s with arrows, and the mother wept over them till she became a rock weeping incessantly. This rock is identified with an archaic figure carved out of stone on Mt. Sipylus near Smyrna. The famous group sup-This rock is posed to be by Praxiteles, or Scopas, has many partial copies in Florence.

Niobium, or Columbium, a metallic chemical element, symbol Nb or Cb, atomic weight 94. It is usually associated with tantalum, and occurs in the minerals tantalite, columbite, and fergusonite. The metal is obtained by reducing the chloride with hydrogen in a red-hot iron tube, or by reducing the oxide with carbon in the electric furnace. It is a steel-grey powder of sp. gr. 7.06, burns on heating in air, and is soluble in warm concentrated

sulphuric acid.

Niobrara, a river of Nebraska, U.S.A., rises in Sioux co. It joins the Missouri at N., after a shallow and rapid course of 450 m.

Nio Ios, an island of Greece, 92 m. S.S.E. of the south-eastern extremity of Eubœa, and forming one of the or Earlier, and forming one of the group known as the Cyclades (q.v.). There is a good harbour on the western coast, where the chief town, Ios or Nios, is situated. The island is said to have been the burial place of Homer. Area 52 sq. m. Pop. 2000.

Niort, a city of France, and cap. of Sèvre-Deux-Sèvres, the R. E.N.E. es, on the 42 m. E.N Niortaise, 42 m. E.N.E. of La Rochelle. It possesses a noted church of the 15th century, and an old castle in which Madame de Maintenon was The manufs. arc boots and gloves, and brushes. Pop. born. shoes, 23,00ó.

Nipani, a tn. of British India in Bombay Presidency, 70 m. N.N.E. of Goa, with considerable trade. Pop.

12,000.

Nipigon, a lake and river of Ontario, Canada, 30 m. N.W. of Lake Superior. Tho lake is 70 m. long and over 1000 islands. The river drains tinguished, put out, annihilated, N.

Ninon de Lenclos (1616-1706), see the lake, and is the largest which flows into Lake Superior. It is noted for its trout fishing.

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Nipissing, Lake, a lake of Ontario, anada, about halfway between Canada, Huron Lake and the Ottawa R. It is 50 m. long, 20 m. broad, and contains numerous islands. The Sturgeon R. enters it on the N., and the lake enters Lake Huron by the French R.

Nippon, Niphon, or Dai Nippon, the native name for the whole of the Japanese empire. It is used particularly of the principal island of Japan—Honshiu.

Japan—Honshiu.

Nippon Yusen Kaisha (Japanese Mail Steamship Co., Ltd.), the most important steamship company of Japan, established in 1885. The Mitsubishi Kaisha and the Yubin Kisen Kaisha lines were formed as early as 1871, the two amalgamating (1876) as the Three Diamonds Company. The government attempted another line, the Kyodo pany. to run Unyu Kaisha (Union Navigation Co.). in 1882; but this, proving a failure, was amalgamated with the earlier Mitsubish Kaisha (1885), the two being thenceforward known by the present name. In 1899 the Japanese Diet granted subsidies to the com-pany's European and American lines, which carry the mails. During the war with Russia (1904-5) fifty-five transports were supplied by the Comtransports were supplied by the Company, which now ranks ainth in point of tonnage among the world's twenty-one ohief maritime companies. Services from Yokohama—fortnightly to London and Antwerp, monthly to Melbourne (Australia) and Victoria (British Columbia). Steamers also visit Bombay, Shanghai, Vladivostock, New-chwang, Tientsin, and local ports, and Seattle for U.S.A. London offices, 4 Lloyd's Avenuc, E.C. Fleet of over eighty vessels (aggregate tonnage about 321,750). Nippur,

Nippur, or Niffer, was an ancient city of Babylonia, 100 m. S.E. of Bagdad. It was the seat of the worship of the Tumerian god, En-lil.

Niris, or Niriz, a tn. of Persia, in the prov. of Kerman, 10 m. S.E. of Lake

Niriz. Pop. 9000.

Nirmal, a fortified tn. of India, in the state of Haidarábád, and 118 m. N. of that city. Pop. 11,000.

Nirvana, the highest state spiritual attainment for the Buddhist. As in all transcendentalism, there is much difference in the conception of it among Buddhists and much misconception in the Western mind. The individual passes through a cycle of existences or re-incarnations subject 50 m. wide, with a circuit of 580 m. to pain, anxieties, and all evil due It is exceedingly deep, and contains to 'desires;' and when these are ex-

is attained. Nothing is predicated as upon him to secure a jury) as altered BUDDHISM.

Nisan, see ABIB.

Nisard, Jean Marie Napoleon Désiré (1806-88), a French historian and critic, born at Châtillon-sur-Seine. In 1826 he joined the staff of the Journal des Débats, and later of the National. Under the empire he became inspector-general of education (1852) and director of the Ecole Normale (1857-67). He was elected to the Academy in 1850. His chief work was Histoire de la Littérature française, 1844-61; followed by Etudes d'His-toire et de Littérature, 1859-64; and Les Quatres Grands Historiens latins, 1875.

Niseemi, a tn. of Sicily, in the prov. of Caltanisetta, 30 m. S.S.E. there-

from. Pop. 15,000.

Nish, or Nis, a fortified garrison tn. of Servia, and cap. of the dept. of Nish, on the l. b. of the Nishava. Its position is important from a strategie point of view, for it lies at the convergence of several of the important vergence of several of the important Balkan high roads, and also at a rail-way junction. It is also a centre of commercial activity. There is a rail-way repairing factory, and an iron foundry. N. is the see of a bishop and a royal residence. Pop. 22,000.

Nishapur, a tn. of Khorassan, Persia, 44 m. S.W. of Meshed. Omar Khayyém was born and buried here.

Khayyam was born and buried here. Pop. 15,000.

Nisi, a vil. of Messenia, Greece, 2 m. N. of the Gulf of Messenia, and 20 m. E.N.E. of Navarino, with anti-quarian remains. Pop. 7000.

Nisi, Decree, see DIVORCE.

Nisibis (called Antiocha Mygdoniæ during the Macedonian rule), the cap. of ancient Mygdonia, N.E. Mesopo-It was taken by the Partamia. thians in 149 B.C., and several times cantains in 142 S.C., and several times fell into the hands of Rome, being captured by Lucullus (68 B.C.), by Trajan (116 A.D.), and by Lucius Verus (165 A.D.). It was finally ceded by Jovian to the Persians in 363 A.D. village of Nisibin a. S.E. of Diabekr, The Turkish (10,000), 85 m. occupies the sitc.

Nisi Prius (literally 'unless before '). When the judges sit at the assizes to try civil actions they are still said to be 'sitting at nisi prius,' though the words nisi prius have lost their original significance. Nisi prius de-notes no more at the present day than the commission by virtue of which judges are empowered to try civil causes at assizes. The words nisi prius originated in the writ of Venire Facias (a writ addressed to the sheriff of a county where a par-

to future existence; it merely asserts in form by the Statute of Westmin-freedom from the 'wheel of life.' See ster II. to square with a prevalent practice by which inconvenience to jurors was avoided. Prior to this alteration, if jurors were summoned from any part of England whatso-ever, they were bound at least in theory to come up to Westminster (where the king's courts then were) and wait about until the case in which they were summoned came on. The result was that the inconvenience was partially mitigated by the practice of attorneys allowing the action to be pending in Westminster from term to term until such time as the justices were about to go on circuit to the particular county whence the jurors had been drawn, and then transferring the case to those justices as soon as it was certain they were coming. The Statute of Westminster II. provided that the writ of venire should contain words to the effect that the sheriff should command the jurors to come to Westminster on such a day in such or such a term, nisi prius (unless before) that day the justices appointed to take assizes should como into the county in which the cause of action lay. See also ASSIZES.

Nismes, see Nîmes. Nitella, a sub-genus of the algeorder Characem, inhabiting pools and slow streams in which they are subexhibits the movement of the proto-plasm under the microscope better even than most of the other green

algæ.

Nith, a Scottish riv., rising about 9 m. S. of Cunnock, Ayrshire, which flows S.E. about 60 m. to enter the Solway Firth 10 m. S. of Dumfrics.
Nithard (A.D. 790-844), a Frankish

historian. He was appointed abbot of St. Riquier, and met his death fighting for Charles the Bald. His De dissensionibus filiorum Ludovici pii is a useful history of the Carlovingian empire.

Nithsdale, William Maxwell, fifth Earl of (1676-1744), supported the cause of the Jacobites in their rising of 1715. He was captured after the battle of Preston, imprisoned in the Tower and condemned to death. His wife devised a plot and secured his escape; he fled to Romo and joined the Elder Pretender. The story of his flight was written by the Countess of Nithsdale, and published in the Transactions of the Society of Anti-quaries of Scotland.

Nitrates, see NITROGEN. Nitre, or Saltpetre, Nitre, or Saltpetre, potassium nitrate (KNO₃); Chile saltpetre is sodium nitrato (NaNO₃). It is found ticular action was to be tried calling on the ground and impregnating the upper soil in India and Persia; the very slightly soluble in water. It is sodium nitrate is found in Chile and Peru. The soil is lixiviated and the and benzidine; and for fiavouring pure salt obtained by crystallisation. and perfuming purposes under the Potassium nitrate issued in the manufacture of gunpowder, sulphuric acid, and nitric acid, and in medicine as a diuretic and diaphoretic. The sodium nitrate is used for the manufacture of potassium nitrate and sulphuric and nitric acids, and as a manure.

Nitrian Desert, see NATRON LAKES. Nitric Acid, see NITROGEN.

Nitric Oxide, see NITROGEN.

Nitrification, the process by which organic nitrogenous compounds in the soil are oxidised, the whole or greater part of the nitrogen being converted into nitrates, chiefly of calcium or potassium. It was believed to be a purely chemical process until 1877, when it was discovered to be due to the agency of minute bacteria. The process occurs in two stages, following the action of putrefactive bacteria which produce ammonium compounds; one type of bacteria oxidises these partly into nitrites, and another type completes the oxidisation into nitrates. An adequate supply of oxygen and water, darkness, a suitable temperature, and the presence of alkaline salts are essential to the proccss, which is the means by which plant foods are made available for the plants.

Nitriles, esters of hydrogen cyanide or prussio acid. They form a series which may be prepared by heating the alkyl halogon compounds with potassium oyanide. The lower members, as methyl cyanide, or acctonitrile (CH₂CN), and ethyl cyanide, or propionitrile (C₂H₂CN), are colourless liquids with a somewhat pleasant odour, and are miscible with water. The higher members are insoluble. The N. have corresponding isomers known as isonitriles, carbylamines, or

isocyanides. They are colourless liquids of disagreeable odour.
Nitrites, see Nitrogen.

Nitrobenzene (C₆H₅.NO₂), a nitrated derivative of benzene. It is usually prepared by slowly adding to ten parts of benzene a mixture of twelve parts of nitric acid of sp. gr. 1.45 and sixteen parts of concentrated sulphurio acid at a temperature under 40°. The vessel should be kept moving so as to keep the various constituents in contact, and when all the acid has been added, the mixture is heated to about 80° for half an hour, and then cooled. The N. collects at the bottom of the vessel, and after separation is fractionated to eliminate benzene and dinitrobenzene. N. is a pale yellow oil with a strong smell of bitter almonds. It has a sp. gr. of Nitrogen, a non-metallic chemical 1.2 at 20°, and boils at 205°; it is element, symbol N, atomic weight

its poisonous nature.

Nitro-cellulose, or Gun-cotton, a compound formed by the action of nitric acid on cellulose. The chemical constitution of cellulose is itself a matter of doubt, and ordinary guncotton probably contains a mixture of nitrates, though C6H7O2(NO2)2 is usually given as the formula. N. was prepared by Schonbein of Basel in 1846 by the action of strong nitric acid on cotton. In the modern method, a mixture of concentrated sulphuric and nitric acids is omployed; the idea being that the nitric acid is main-tained in an anhydrous state in solution in the sulphurle acid, and that there is always sufficient excess of sulphuric acid to take up any water which may be produced during the reaction. Attempts were made to utilise gun-cotton as an explosive, but without success, until it was produced in the form of a colloid by the action of certain solvents, as acetone. (See CORDITE.) The lower nitrates of cellulose are used in the preparation of artificial silk and of celluloid. The danger arising from the inflammable nature of nitrated cellulosc in films for cinematograph purposes has led to the employment of other cellulose compounds, with some measure of success.

Nitro-eompounds, or Nitro-derivatives, those compounds which are formed by the action of nitric acid on aromatic substances. When an aromatic compound such as benzene is treated with nitric acid of sp. gr. 1.3 to 1.5 at ordinary temperatures, a mononitro-compound is usually produced; and, generally speaking, the more concentrated the acid and the higher the temperature employed, the greater will be the proportion of high nitrates. The product is in such cases a mixture of dinitro and trinitro derivatives. The concentration of the acid is usually effected by mixing the nitric with a larger proportion of concentrated sulphuric acid, which effectually absorbs the water produced in the reaction, and maintains the nitric acid in a concentrated condition. The N. are for tho most part yellow, stable, crystalline substances, only slightly soluble in water, but readily soluble in alcohol, ether, etc. With various reducing agents, as tin, zine, or hydrochloric acid, N. are converted to amino-compounds, thus nitrobenzeno (C₆H₅.NO₂) is converted into aminobenzene or aniline (C₆H₅.NH₂).

14.01. At ordinary temperatures it is: a gas, and occurs in an uncombined state in the atmosphere, forming approximately 79 per cent. of air by volume. It also occurs combined with other elements in animal and vegetable substances: in various minerals as ammonium salts; in the form of nitrates in Chile saltpetre and other deposits found in the soil. The gas is colourless, tasteless, and odourless; it is slightly soluble in water, to a less degree than oxygen; it is slightly lighter than air. N. was discovered as a constituent of the atmosphere by Rutherford in 1772. It was recogniscd as an extremely inert gas, and all attempts to bring about direct combination with other substances for a time failed. In 1785 Cavendish showed that N. combined with oxygen in the neighbourhood of an electric spark discharge. This method was used by later investigators, and iu 1894 Lord Rayleigh demonstrated the presence of argon in the atmosphere bycausing all the N. in a sample to be combined in this way. In 1892 Sir W. Crookes showed that the electric are caused the formation of a N. and oxygen compound, and attempts have been made to put the production of N. oxides on a commercial footing.

The artificial production of N. compounds derives its importance from the part played by N. in vegetable life. N. does not constitute a large proportion of the elements contained in vegetable methods. in vegetable matter; but it is a very essential constituent, and, as far as is known, plants are unable to utilise the N. of the atmosphere directly. The N. employed in building up the tissues of plants is contained in the soil in the form of nitrates, ammonium compounds, etc. These nitrates probably owe their existence to the activities of certain micro-organisms which have the power of causing the com-bination of atmospheric N. Under Under cultivated ordinary circumstances, cultivated land uses up the nitrates thus formed more rapidly than they can be re-placed, so that the N. supply has become a pressing problem to the agricultural world. Experiments have been successfully made in the direction of cultivating bacteria of peculiar effectiveness as regards production of nitrogenous compounds, but the usual ncthod is to dress the soil with ma-nures consisting largely of nitro-genous material. The main source of nitrogenous manure has hitherto bccn the natural deposits found in vast quantity in parts of N. and S. America, particularly Chile and Peru. continued exportation of these niexhausted, so that an economical method of fixing atmospherio N. is assured of commercial success. Among recent developments of methods for the fixation of atmospheric N. may be mentioned the calcium cyanamide process. This requires calcium carbide to be heated to 800-1000° C. in an electric furnace, while N. obtained from the atmosphere is passed through the heated mass to form calcium cyanamide (CaCH2), a most valuable manure.

N. is usually obtained from the atmosphere by removing the oxygen. This may be done by passing a cur-rent of air over copper heated to redness, by hurning phosphorus in a confined volume of air, or by the action of an alkaline solution of pyrogallol on air. It may also be prepared from ammonia by passing a current of chlorine through the hydrate, or by heating ammonium nitrite or a mixture of ammonium chloride and sodium nitrite. The gas obtained by removing the oxygen from atmospheric air contains argon and small quantities of other gases besides N. All of these gases are so inert ohemically that they can with difficulty be separated. Recently, what appears to be an active modification of N. has been discovered. In 1911-12 Strutt demonstrated that an electric dis-charge acted upon a low pressure current of N. ln such a way as to procurrent of N. in such a way as to produce a continuance of the glow after the gas had passed the region of the discharge. This luminous gas converts ordinary phosphorus into red phosphorus, while sodium and merosphorus, cury combine with the gas when heated within it.

Compounds .- N. forms with oxy-Compounds.—N. forms with oxygen five oxides: nitrous oxide (N₂O₃), nitric oxide (N₂O₄), n. peroxide (N₂O₄), and N. pentoxide (N₂O₄). Nitrous oxide (N₂O₃), or laughing gas, is prepared by heating ammonium nitrato. The oxide is a colourless gas with a pleasant odour and taste. It condenses at 15° C. under a pressure of 10 structure. under a pressure of 40 atmospheres. It is soluble in water, is easily decomposed by heat, and resembles oxygen in supporting combustion. It has marked anæstlictic properties, and is used in dental practice to a great oxtent. There is a corresponding oxyacid, Hyponitrous acid (H_eN₂O₁), forming salts called hyponitrites, of which the silver salt is most usually prepared. Nitric oxide (NO) is pre-pared by the action of dilute nitrio acid on copper, or by the action of sulphurie acid on a mixture of potassium nitrate and ferrous sulphate. It is a colourless gas which readily comtrates has given rise to the apprehen-bines on admixture with oxygen, sion that they will quickly become forming reddish-brown fumes of N.

peroxide. It is only sparingly soluble | A number of organic substances are in water, and is difficult to liquefy. Nitrogen trioxide (N₂O₃) is prepared by decomposing a nitrite with sulphuric acid. It is a very unstable compound, and the gaseous form is probably a mixture of nitrio oxide and N. tetroxide. At low temperatures it condenses to a blue liquid. It is the

which are all soluble in water, and give off reddish fumes when heated Nitrogen with a warm mineral acid. peroxide, or tetroxide (N2O4), is formed by the direct combination of nitric oxide with oxygen, and the condensa-tion of the reddish-brown fumes. The liquid is colourless at low temperatures, but darkens in colour as the temperature rises. Bodies which burn with sufficiently high temperatures to decompose the gas will continue to burn in it. Water decomposes N. peroxide with the production of nitrous and nitric acids at low temperatures, and of nitric acid and nitric oxide at high temperatures. Nitrogen oxide at man temperatures. *Natogen* pendoxide (N₂O₂) is a white crystaline solid obtained by the action of phosphorus pentoxide on nitrio acid at a low temperature. At 30° C, the crystals melt to form a yellowish is a solid control of the crystals and the crystals are temperatures. liquid which tends to decompose at higher temperatures. N. pentoxide is very readily soluble in water, forming nitric acid, which forms salts called nitrates. Nitrio acid is a colourless, fuming liquid with a powerful oxidising action. It readily chars dry or-ganic matter and attacks metals, forming the oxides or the nitrates. The nitrates are all soluble in water and decompose at lugh temperatures.

N. forms with hydrogen the compound Ammonia (NH₂) (q.v.), which was at one time supposed to be the oxido of a metal ammonium. No such mctal has been satisfactorily isolated, and the ammonium salts are thereregarded as derived from radicle (NH₄), which behaves chemically in much the same way as the alkaline metals: sodium, potassium, Nitrogen trichloride (NCl.) is etc. obtained by the action of chlorine on ammonium chloride. It is a volatile yellow oil, irritating to the mucons membrane, and is very explosive. Nitrosyl chloride (NOCI) is obtained by the combination of nitric acid and chlorine. It is an orange-coloured gas which is readily liquefied. Nitrogen sulphide (N₄S₄) is obtained by the action of ammonia on sulphur chloride. It is an orange-coloured crystalline solid, melting at 178° C.

Nitrogenous Manures stimulate the

rich in nitrogen, such as guanos, meat and fish residues, rape dust, and other vegetable residues, and also various industrial residues known as shoddies. Of purely N. M. there are five in ordinary use, viz. sulphate of ammonia, a by-product in the manufacture of coal-gas; nitrate of soda, which occurs naturally in extensive denosits in Chile; soot; and nitrolim (calcium cyanamide) and nitrate of lime, both of which are manufactured artificially from the nitrogen in the atmosphere.

Nitrogen Peroxide, see Nitrogen. Nitro-glycerine (C₃H₃(ONO₂)₃) was produced first by Sobrero in 1846 by the action of nitrie acid on glyccrol. Nobel introduced it into the manuby mixing 12 parts of funing nitric acid with 20 parts of sulphuric acid and forcing a spray of glycerol through the mixture, which is kept cool by a current of air. The mixture is allowed to care ture is allowed to stand, when the N. forms a layer on the surface, This layer is run off into water, from when the which it separates as a heavy oil. is then treated with sodium carbonate to free it from acid, and then dried by filtering through felt covered with a layer of salt. It is a heavy, colourless liquid, which solidifies at 8°C. It is very poisonous, and has a sweetish, burning taste. Sometimes it is used in medicine. If touched by a flame it simply burns, but if heated in a confined space it explodes violently. In the form of a liquid there are many dangers associated with the uso of N. To obviate these, as well as to increase its explosive force, Nobel discovered dynamite, in which N. is absorbed in kieselguhr, a fine, siliceous The mixture is pressed into cartridges and fired by a detonator. Many other explosives (e.g. blasting gelatine, cordite) are simply made by mixing N. with various absorbent materials.

Nitro-sulphuric Acid (H(NO)SO4) is obtained as an intermediate product in the commercial manufacture of sulphuric acid. It is produced by the interaction of sulphur dioxide, nitrogen peroxide, and water. It is a white crystalline compound which is dccomposed by excess of water, forming sulphuric acid and a mixture of nitric

oxide and nitrogen peroxide. Nitrous Acid, see NITROGEN.

Nitrous Ether, or Ethyl Nitrate (C.H., NO.), is a colourless liquid (sp. gr. 0.947 at 15.6°; bolling-point 18° C.) with a pleasant fruity odour like apples. It is usually prepared by distilling a mixture of alcohol and sulphiricacid with copperand nitrioacid. production of leaf and stem in plants, It is insoluble in water, is hydrolysed

550.

by holling water and dilute alkalies. spirit of nitro 'used in medicine.
Nitsa, a riv. of W. Siberia, Russia.
Length 300 m.
Nitebil and is a component of the 'sweet spirit of nitro' used in medicine.

Nitshill, a vil. of Renfrewshlre, Scotland, 3½ m. S.E. of Palsley. There are coal-mines and quarries in the neighbourhood, and the manufacture of chemicals is carried on. Pop. (1911) 1300.

Nitzsch, Friedrich August Berthold (b. 1832), a Gorman theologian, son of Karl Emmanuel N., was born at In 1868 he was appointed Bonn. profess

in 187 cludo: . Grundr∴

geschichle, 1870.

Nitzsch, Karl Emmanuel (1787-1868), a German theologian, born at Borna, Saxony. In 1813 he became a parish minister at Wittenberg, in 1822 professor of theology and university preacher at Bonn, and in 1847 professor and university preacher at Berlin, becoming later a member of tho upper council of the Church there. His chief writings were: System der christlichen Lehre, 1829 (Eng. trans., 1849); Praktische Theologie, 1847,

and several collections of sermons. Niu-chwang, see NEW-CHWANG.

Niue, a coral island in the S. Pacific Ocean, in lat. 19° 10' S. and long. 169° 47' W. It is 14 m. long and 10 m. wide. It was annexed to New Zealand in 1901. Straw-platting is one of the chief occupations, and hats, nuts, and fruit are exported. Pop. 4400. Nivelles, a tn. of Belgium in the

prov. of Brabant, on the Thines, 20 m. of Brussels. It has important railway works, and manufactures of parchment, cotton, and lace. There is a fine Roman church of St. Gertrude, dating from the 11th century. Pop. 12,000.

Nivernals, a former prov. in the centre of France, nearly coinciding with the modern dept. of Nievre. It was ruled by the Counts of Novers in the middle ages, was created a duchy

by Francis I., and re-annexed to the crown lands at the Rovolution.

Nix and Nixie, in Teutonic mythology, male and female water spirits, for the most part malignant. They for the most part malignant. They were represented as of human form, and frequently mixing with mortals, particularly in music and dancing. See DEMONOLOGY and NICKER.

Nixdorf, a tn. of Bohemia, Austria, 32 m. N.N.E. of Leitmeritz. Pop. 7676. Nizam, the title of the sovereign of

Haidarabad.

Nizhne-Tchirskaya-Stanitsa, a tn. of Russla, in the ter, of the Don Cossacks, 50 m. N.E. of Novo Tchor-Pop. 15,100.

Nizhne-Udinsk, a tn. of Siherla, Russia, in the gov. and 270 m. N.W. of the city of Irkutsk, on the Transsiberian Railway. Has gold-mines. Pop. 6000.

Nizhni-Novgorod, see NIJNI-Nov-

COROD.

Nizhni-Tagilsk, a tn. in the gov. of Perm, Russia, on the R. Tagil, 63 m. N. of Ekaterinburg. Copper, gold, platinum, and iron are worked: there is a trade in corn and manufacture of

wooden ware. Pop. 32,000. Nizniau, a vil. of Galicia, Austria-Hungary, on the r. b. of the Dniester, 80 m. S.S.E. of Lemberg. Pop. (esti-

mated) 5083.

Nizza-Monferrato, a tn. of Piedmont, Italy, in the prov. and 16 m. S.W. of the city of Alessandria, on the Belbo. Pop. 9200.

Njörd, in Scandinavian mythology, the god of the sea, corresponding to a certain extent to Neptune, being the spirit of air and water, while Ægir was the bodily impersonation of the sca. His wife was Skade, his son Frey, and his daughter Freyja. Njurunda, a tn. of Sweden, in the

prov. of Vesternorrland, at the mouth of the Njurunda, in the Gulf of Bothnia, 11 m. S.S.E. of Sundsvall. Pop.

8883.

N'Kandhla, a magisterial div., S. of the Vryheid div., Zululand, Natal. Area, 762 sq. m. It contains the It contains the Insuzi valley with Cetewayo's burial-place, which the natives regard with superstitious reverence, and the Insuzi gold-field. The settlement of N.T. is 85 m. N. of Durban. Pop. 30,000.

Noah, son of Lamech, is described in the Book of Genesis as the head of the family that survived the Deluge; and hence as the patriarch of mankind after his time. For the story of

the Deluge, see Deluge

Noah, the Book of, a lost Hebrew ork which has, however, been largely incorporated into the Ethiopic Book of Enoch and the Book of Jubi-From these we learn that it dealt with the birth and life of Noah. It must not be confused with the late Hebrew work of the same name and partly based on it, given in Jellinek's Bet ha-Midrasch.

Noailles, the name of a noble French family which dates from the 11th century, the chief members of which aro: Antoine de (1504-62), appointed admiral of France in 1547, and ambassador to England from 1553-56. François de (1519-85), a diplomatist, a brother of Antoine; was amhassador to Venico, Constanti-nople, and England. Anne Jules (1650-1708), took part in the siege of Maestricht in 1673, persecuted the Protestants in Languedoc, and be-

came marshal of Franco in 1693. Louis the greatest work of an ideal ten-Antoine (1651-1729) became Arch-bishop of Paris in 1695, and cardinal in 1700. He opposed the bull' Unigenitus' in 1713, for which he was expelled from the court, but he accepted it in 1728. Adrien Maurice (1678-1766) served in the Spanish War, 1705-11, in the wars in Germany, and in those in Italy. He was defeated at the battle of Dettingen in 1743, but distinguished himself at Econtaron, in 1716 Fontenoy in 1745. Philippe (1715-94), became marshal of France, and served in Germany and Flanders. He and his wife, who was nicknamed 'Madame l'Etiquette' by Marie Louis Antoinette, were guillotined. Louis Marie (1756-1804), a general and politician. He served under La Fayette in America, and when he was appointed a member of the Military Committee he drew up a plan for the reorganisation of the army. He also proposed that titles should be abolished. He was mado brigadiergeneral in San Domingo, but was killed in an attempt to capture an English ship off Cuba. Paul (1802-85), a politician and author, became 85), a politician and author, became a member of the French Academy in 1849, and published Histoire de la maison royale de Saint-Louis établie à Saint-Cyr; Histoire de Madame Maintenon et des principaux événements du règne de Louis XIV. Jules Charles Victurnien (1826-95), an internation de la consenie de author, wrote works on economics, and contributed to the Revue des Deux Mondes.

Noakhall, or Sudharam, a tn., the cap of a dist of the same name, Bengal, India. Pop. 7000. The dist has an area of 1644 sq. m. The chief

exports are rice, betel-nuts, linseed, and hides. Pop. 1,150,000.
Noale, a com. of Venice, Italy, 14 m. N.E. of Padua. Pop. 5000.

Nobel, Alfred Bernhard (1833-96), a Swedish engineer and chemist, born at Stockholm. In 1842 he went to St. Petersburg with his family, and studied the construction of torpedocs and marine mines with his father. In 1859 he returned to Sweden and devoted himself to the study of explosives, especially the utilisation of nitro-glycerine. In 1867 he discovered and patented the explosive mixture known as dynamite. A few years later he produced ballistite or smokeless powder. From his various other inventions and discoveries and the exploitation of the Baku oil-fields he exploitation of the Baki off-ration he amassed a large fortune. At his death ho left the bulk of it in trust for five annual prizes worth £8000 each, to be awarded without distinction of nationality or sex. The first three were to he awarded for eminence in (1) physics, (2) chemistry, (3) physic-privilege has no legal recognition.' logy or medicine. The fourth was for This dietum, however, must be under-

denoy, and the fifth was to be given to one who rendered the greatest service to promote international peace. The Swedish Academy awards the first four, and the fifth is presented by the Norwegian Storthing. The awards

have been made annually since 1901. Nobile Officium, a term in Scots law which is practically equivalent to the English's equity. Generally speaking, it may be said to denote the inherent power of the Court of Session to pro-eeed as a court of equity or hy the rules of conscience, in ahating the rigour of the law, and to give a remedy in fit cases to those who have no remedy by the rules of strict law. The long recognised opposition in England between the terms law and equity has never been known in Seotland, and the N. O. is the only approximation thereto. It is perhaps not surprising that the Scottish nation found no need for a system of equity, since its law is for the most part founded directly on the ready-made Roman law, which in its latest development embodied all the rules of the Prætorian equity. The Inner House alone exercises the jurisdiction except in cases where petitions are required by statute to be presented to the junior Lord Ordinary. In-stances of its exercise are: (1) Petitions for the custody of children; (2) applications to settle schemes for the administration of charitable trusts; (3) applications to supply omissions in deeds.

Authorities.—Erskine's Principles of the Law of Scotland; Bell's Dietionary and Digest of the Law of Scotland.

Nobility. It is difficult to define N .. because the term connotes different qualities and privileges with different nations, and even with the same nations at different periods. N. does not necessarily imply titles, though at the present day it would be a violation of conventional ideas to speak of any one as a noble who had no title, e.g. Article I. of the U.S. Constitution contains a provision against the grant of any title of N., with the result that the wealthiest 'dollar king' of that country is no more than a common citizen. Again, the English baronial N. differed in important essentials from the N. of the Continent, whether of France, Germany, or the mediæval republic of Venice. Bishop Stuhhs points out (Const. Hist.) that 'the great peculiarity of the control of the co liarity of the baronial estate in England, as compared with the Conti-nent, is the absence of caste, because in the English system 'the theory of nobility of blood as conveying political privilege has no legal recognition.

the

tions: (1) English peerages may be-come extinct or fall into abeyance, reveal striking differences of origin but so long as there is an heir to the title that heir is ipso facto an hereditary equiscilor of the crown or member of the House of Lords, totally irre-The !

v is that, whereas in the former one member only (the cldest son or next heir) of a family is noble in the sense of being a member of the peerage and an hereditary eounsellor, in the latter the whole kin of eertain families enthe whole kin of certain families chijoyed political privileges from the
fact of descent from an oligarchic
aristocracy, and were therefore accounted noble. (2) However English
constitutional law may ignore the
idea of caste, the undoubted social
pre-eminence of a peer or lesser titled
persou in England, accorded no less
by title than by landed estates, convery for the popular mind something veys to the popular mind something altogether indistinguishable caste. The sanctity of an English peer, notwithstanding Parliament Acts, is still reflected in the proverbial saying that the people 'dearly love a lord.' It is true that N. may be defined as a quality or dignity 'whereby a man is lawfully above the estate of the vulgarand common sort of people, and that various ancient writers like Simonides and Aristotle have defined the word by reference to a 'long and wealthy ancestry,' and 'a certain honourable distinction of ancestry respectively, while one Jodocus Clickthovius described it as ' an excellency of gentle race or of some other good quality'; but these 'definitions,' where not quite untrue—as in the case of recently conferred titles on successful merchant-politicians-are no more than descriptions of charaeteristics usually flowing from the possession of titles and hereditary privi-The essence of orthodox N. is not social or moral pre-eminence, but political privilego founded either on hereditary succession or descent, or specially conferred by royal prerogative upon some novus homo, and as soon as any particular N. becomes divested of these political privileges, it soon ceases to exist as a noble order in the system of commendation by at all. It may be said without dis-which the lord, in return for the allerespect that oxi

are unknown an ant persons, and sorption of the

of Italy, the few possible modern descendants of the eclebrated medleval optimates of Venice are also as gold laec on a frieze coat.

stood with two important reserva-lof the three types of N., classie or and development. It is proposed to notice the patriciate of ancient Rome the aristocracy of Greece, the N. of Venetian republie, and the feudal aristocracy of England and their modern representatives.

The early Roman patriciate, which was synonymous with the populus or original people of Rome, was based upon an eponymous ancestry (Romulus, founder of Rome) and upon the fact that the privileged members of the gentes were descendants of those who first occupied the hills of ancicot Rome. Later, when it was shorn of its political privileges, the patriciate retained its spiritual or religious significance—a significance due to the fact that none but the members of a clan or gens could participate in the sacra proper to the gens, and that very early in the history of Rome certain offices like those of the flamens (q.v.) had always gone to a patrician. But the hereditary N. of the republic or signory of Venice, for all that r semblance between Rome and Venk in their respective constitutions an polleies, which drew from the 17t century historlan, Howell, the quair observation 'she (Venice) is more like old Rome than Rome herself as no she is, as if the soul of old Rome by Pythagorean kind of metapsychosi were transmigrated into hcr, had i it nothing spiritual or religious, traco its origin to no original occupancy nor boasted a descent from a commo founder of the race as distinct from past holders of office. The ancien Roman N. was literally a N. of precedence, that of Venice sprang conclusively from a commercial plutocrae. and gradually usurped and returned all the political power in the republi until the Church vindicated the right of the lesser orders (see also MUNICI PALITIES). The English N. of th Conquest and the middle ages wa essentially feudal and military, and based upon the solid foundations o landed estates. Liko that of the feuda N. of the Normans and Germans, its origin is to be sought in the persoon relationship of lord and vassal, and of personal services (generally

y or incidental thereto) of lu-gave or 'loaned' him land and sorption of the the modern kingdom The modern N. of England, in so far as it is composed of desceudants of ancestors who eamo over with the Conqueror, resembles the old feudal N. in no other respect now than in the But though political privilege is fortunate fact of possessing huge the mainspring of N., a brief survey landed estates; but for the rest the

body of peers (including dukes. viscounts, earls, and marquises), some with patents entitling them to sit in the Upper House and some without, and baronets and knights, the great majority of whom possess titles of recent creation, awarded for political or other public services. Only a few of the existing English peerages go back before the time of William Pitt the Younger, who himself created

160 odd. Roman nobility. — Probably no national N. subsisted in its integrity so long as the ancient Roman populus. Florentine, Venetian, and Milanese dukes and signors rose and fell within a comparatively trifling period of time; the residue of English ducal heads that can claim an unbroken pedigree back to the Norman period possess, it is true, at least one-fifth of the area of the country as their private property, but they have no special political privileges by reason of that territorial wealth. If there were one reason which more than any other might account for the endurance of the Roman populus or decurial heads as political monopolists, legislative and executive, it might be said to he the fact that the privileged families were bound together by strong religious ties. The mero fact of birth in one of the families forming a member of a gens gave the entrée to a sacred circle which was not only closed to ali outside, but even in the day of the empire, when the ancient significance of populus had long been forgotten, still retained a certain exclusiveness. But after the time of the admission of the plebs to a share of political rights and the legislation of intermarriage between patricians and plebeians (terms which in their later meaning must not be understood with the popular invidious connotation), the Roman N. underwent many metamorphoses. It was after the expulsion of the kings that the plebeians, or meteci, began really to gain ground. When they became temporarily allied with the ancient burgesses to avert the threatened danger of a reversion to monarchical tyranny, the latter found they could not cast them off as casily as they had hoped. The patricians and plebcians, on the latter becoming enrolled in the registers of the curies and entitled to sit in the common assembly, were thus amalgamated in a new corporation of Roman civis or burgesses; but this was as yet far from a genuine fusion, and indeed, according to Mommsen, one consequence of this participation in politi-quence of this participation in politi-cal rights was the conversion of the various concessions were gradually old burgesses into a clan-nobility. The followed by the equalisation of the

British N. consists of a heterogeneous, old patricians then became for a time, as did the Venctian signors of a later date, a genuino N., in the sense that they were incapable of receiving additions to their ranks or oven of filling up their own defections, for tho simple reason that they themselves no longer possessed the sole right of passing decrees in the Assembly. Thus, while under the kings the ranks of the Roman N. were open to nominees by the decrees of the curial assembly, and the admission of new clans was of frequent occurrence, from honceforth this genuinc characteristic of patricianism made its appearance as the sure herald of the speedy loss of its political privileges and of its im-portance in the community '(Momm-While merit and a genuine hereditary capacity to govern were exhibited, as in the case of some of the Florentine and Venetian nobles, no strong reason can be adduced for substituting a new N. But the Roman N. of the early Republican period displayed from the first that haughty conservatism and disdain of the governed which experience shows be the inevitable precursor to oblivion: and, moreover, there were superadded gratuitous exclusions of the plebeian orders, not only from all public magistracies and public priesthoods, but from the legal possibility of intermarriage with the patrician orders. Prior to the institution of the tribunate of the plebs, too, the aimed at the destruction of the middle classes, especially the intermediate and small landholders, and en-deayoured to develop a dominating ianded and moneyed aristocracy on the one hand, and an agricultural proletariat on the other (Mommson). It was the exclusion of the wealthy and respectable plebeians from the patriciate even after admission to the Senate that proved their downfall and led first to the threat of civil war and the plebeian secession, and then to the establishment of the tribunate of the plebs, though the curious fatalism with which public opinion will acquiesce in the existence of an undeserving N. was proved by (1) the fact that it was not the denial of political equality which hastened the cause of democratio progress in the shape of the tribunate and the written Legal Code, so much as the economic distress of the farmers; and (2) the concessions were not wrung from the politically privileged classes, but from the wealthy landlords and capitalists, though no doubt the net result was the same because the tribunes obtocracy, though, as stated above, the old privileged clans for ever retained their religious individuality, especially their exclusive eligibility to the offices of supreme flamines, and to that of the rex sacrorum, and to the membership of the colleges of Salii. Apart from these exceptions there was a complete throwing open of magistracies and priesthoods to the plebeian order. But though the plebeians henceforth began to reverse the old order of things by legally excluding the old N. from the tribunædileship, the the plebeian second consulship and censorship, the haughtiness of the old patricians survived their class privileges for they 'continued centuries. and rudely and spitefully to display their aristocratio spirit' (Mommsen) in spite of a subsequent complete civic equal-An expression of the jealousy of the old families is to be found in the invidious term 'minorum gentium, which they applied to the recent creations, in contradistinction to 'majorum gentium,' which they applied themselves; which latter term, of course, pointed to their alleged Trojan descent, though strictly this belonged exclusively to the Ramnes instituted by Romulus (see Juvenal, Satire I.). Tho new N. spoken of above arose in spite of this formal Republican equality; it has made up the old N., and the leaguing together with them of non-patrician families of wealth or power who had separated from the plebs, and it was undoubtedly this social and political alliance which enabled the old N. to survive as a N., and to exhibit a phenomenon which will find a parallel in the history of almost every nation, ancient and modern.

Grecian nobility.—Apart from an aristocracy of wealth, it is doubtful whether in their later history there was a N. in the city-states of ancient Greece. If there was, it affords some ground for the assumption that N. and democracy are not inconsistent with each other. Certain it is that a modern social democracy spells the doom of N., a result largely due to the levelling tendencies of a cheap national cdncational system. In the city-state of Athens, on the other hand, it is at least doubtful whether the so-called true democracy was not in reality an aristocracy of mingled birth and intellect. For the mixed settlers or Attio demos which overran Athens andits environs, though free enough to choose their rulers, commonly fixed their choice upon some representative of an ancient and honourable family. If any sort of generalisation he possible

orders and the birth of the new aris-1full of contradictions and seeming anomalies as ancient Athens, it is that the Athenian N. of the period prior to the Dorian invasion furnished a close parallel to the Roman populus. being tribal in its genesis, and claiming precedence from an original occupancy of the soil; but that thereafter, in the heyday of the demos, when the evangeion had lost all their political privileges, there was no N. in the true sense at all—at all events, as distinct from a mere aristocracy of wealth. Long after other city-states had been conquered by the outlying tribes, Athens alone retained its exclusiveness because of the poverty of its soil; and with this exclusiveness it retained its ancient patriciate. when the Dorians conquered the Peloponnesus, there was an influx into Athens of immigrant families from wealthicr districts. Athens then became the most important of the Greek city-states, and immigrant noble families like the Pisistratidae and Alemenide outsions the old Athenian tribal N. in the cyes of the common people. From that time the old military N. of Athens gave place to an aristocracy of wealth. The later democracy was as much a consequence of the better-class hatred as of anything clse, for this class hatrod 'ex-tinguished the last decencies of patriotism' and was reflected in the very divisions of political parties. But while it is true that the Athenlan republic tolerated no N. in the orthodox and only coherent sense of that term, it is difficult, in view of the utter failure of the shallow Athenian democracy, to say wherein the political ascendency of these representatives of aristocratic families, whom the popular voto habitnally selected as its rulers, was in any way inferior to that of the old oligarchic εὐπατρίδαι. The domocracy as an ideal form of polity was no doubt so highly revered by the demos that they resented attacks upon it; but its leaders, certainly its demagogues, do not seem to have commanded much popular respect, if a lesson may be drawn from the universal amusement derived from the satires of Aristophanes on Cleon (see the Pseudo-Xenophon). Amusement and laughter in any populace are consistent only contempt and hatred for the object satirised, though such mauifestation in the liberally educated classes may well he no more than the expression of a translent cynical scepticism. Whatever the faculty for government of that Athenian demos, which, as his-torians assure us, was literally to a man swept hy the scarlet rope into the arena of the 'Ecclesia' or public in the social distinctions of a state so assembly, whatever the peculiar intellectual and artistic range of this without also heing a lord of parliaancient and gifted people, their democratic civilisation, such as it was, Irish peer, or a peercs in her own

appear to have been latently aristocratic to a degree. If this charactercstimate of the Athenians he justified, it furnishes yet another proof of the psychological fact that however depressed the fortunes of existing orders of N. may become in a democracy, ancient or modern, tho people at large will inevitably set up other idols, titled or untitled, in their place, and those idols will almost assuredly be representatives of families of a known and respected lineage.

British nobility .- Judged by the test applied by Mommsen to the Roman aristocracy of the early Republican period, the British N. of to-day, assuming the term to be synonymous with the peerage, is not a true N.; for though no one can diminish its numbers by divestiture of title, whether by reason of attainder on conviction for felony or hy any other way, the king can, on the advice of the ministry, create any number of new peers. It is true that constitutional lawyers assert that forfeiture of dignity or title and deprivation of privileges will still ensue upon attaint for treason or follony, but tolorably recent history shows that attainder does not now follow upon conviction; and indeed there is no reason why a peer who has suffered the ignominy of a criminal trial should suffer this additional punishment, it being really no more than feudal archaism, the primary object of which was to secure to the crown the estates supporting the dignity.

To follow a strictly orthodox procedure, a description and historical account of the present British N. would embrace English, Scottish, and Irish peers, whether necessarily 'lords of parliament, or not, a somewhat wearisome enumeration of their surviving privileges, and a purely antiquarian rescarch into the feudal origin of the different grades of pcers dukes, marquises, earls. viscounts, d barons. But a brief historical and barons. survey only is necessary to understand the value of their present privileges and their exact position relatively to other citizens who cannot claim to be of 'ennobled hlood.' There are five classes of peers apart from the above gradation: (1) Temporal hereditary peers of the United Kingdom, (2) spiritual English peers, (3) sixteen Scottish elected peers, (4) twenty-eight Irish life - cleeted peers, and (5) lords of appeal in ordinary. A person can be a peer

ment, e.g. an unelected Scottish or Irish peer, or a peercss in her own right. Some 133 Scottish and Irish peers out of a total of 262 have the right to sit in the Upper House hy reason of holding peerages of the United Kingdom. Again, some peers are hereditary, others only life peers. On retirement, a lord of appeal (i.e. a judge of the ultimate court of appeal) remains a lord of parliament, but a bishop on retirement loses his seat. A dukedom is the first grade of N., hut at various public functions dukes are lower in precedence than certain high dignitaries of office, e.g. the Archbishop of Canterbury, the Lord Chancellor (if a haron), the Arobbishop of York, and the Prime Minister. 'Duke' is derived from dux, which among both Saxons and Romans meant leader of an army. The number of existing dukedoms, from the fact possibly that as the first Norman kings were dukes of Normandy they did not deem it politic to create other dukes, is stereotyped. Apparently the whole order became extinct in the reign of Elizaheth, but was revived by James I., who ennohled his favourite, George Villiers, as the Duke of Buckingham. Many of the present dukes are princes of the blood royal. Marquisates, too, exhibit a like conservatism in num-hers; and similarly the term 'mar-quis' is now a mere title of honour, though in its origin it denoted those greater barons whose duty it was to guard the Scottish and Welsh marches or borders. New earls are created comparatively often; the term 'earl' (i.e. caldorman) denoted the head of a shire. The expression 'helted earl' 'arises from the mode of investitue of care and the leaf of the care investiture of an earl, a bolt being huckled round the waist and a sword attached to the belt. The term viscount ' is derived from vicearnes, i.e. the sheriff who presided in the county court. Barons form the lowest Anciently, barons grade of peers. were those churchmen or laymen who held land of the king per baronium, i.e. held by honourable service as feudatories of a prince. It is the most general fittle of N., and anciently overy peer of superior rank had a harony annexed to his higher title. It was early decided that the fact of holding per baronium did not necessarily give the right to be summoned hy writ to the House of Lords. Barony does not now depend on land tenure at all, and indeed, the title has gone out of popular use, having long been superseded by 'baronet.' Peers are created: (1) By writ of summons. Such peerages are not complete until the person honoured takes his seat in

specified in the patent succeeds even though the grantee die before taking his seat. Peeresses in their own right who marry commoners retain their titles, but peeresses by marriage lose their titles by such marriage. Apart from the possession of a seat in the House of Lords, which since the passing of the Parliament Act is a privi-lege of problematical value, a peer's only privileges seem to be a right to be tried by his brother peers and exemption from jury service. If, therefore, the English N. be viewed according to old criteria of hereditary succession to political privileges, a totally wrong impression of it is likely to he gained. At the present day whatever the emasculation of political powers may bring forth in the future. the N. of England owes its exalted position primarily to wealth (mainly land) and the glamour surrounding titles of traditional glory. A miseonception of English N. is also likely to arise from the endeavours to make its limits coincident with those of the peerage. Roman, Greek, Florentine, and Venetlan noble orders comprised elans, or families, not merely the individuals who happened to be the eldest son or other heir. But though legally the British N. comprises only the peerage, it would be pedantic to exclude either the younger sons or even other near collateral relatives, or the various existing orders of knighthood (q.v.). At least, this more comprehensive view, if less in harmony with that unreasoning trait in the common mind which reverences titled blue blood from a misty regret for the extinction of the age of chivalry in favour of one of 'sophisters, economists, and calculators,' is more consistent with the real tests of that degree of political weight and social superiority which even in these democratic days are still the rock-bottom of N. What the future of N. in high a quiet, dreamy, and emotional a 'night-piece,' not easy to say, though the rapid not easy to say, though the rapid with which European countries. similate Western ideas leads one suppose that some such oxclusion as that noted at the heginning of this article in the U.S. constitution may find its way even into the British constitution. On the other hand, the same of the constitution with the supposition of the same of th titles, if apparently inconsistent with a true democracy, may well endure in one form or another Indefinitely, from the psychological fact that they do scem to satisfy the human instinct for hero-worship, and in themselves

the House of Lords, when the title services real or imaginary. For it is becomes hereditary. (2) By letters not titles per se that any democrat patent, which mode is said to 'enneed quarrei with; his appropriate noble the blood' because the heir matter for rebuke is the kind of man and the kind of services that receive what Burke called the 'graceful ornament to the civil order, and the Corinthlan capital of polished society.

Bibliography.—Mommsen, History of Rome; E. P. Shirley, Noble and Genlle Men, 1860; Selden's Tilles of Honour, 1672; Litta, Celebri famiglie italiane.

Noble, an ancient English gold coin, first minted by Edward III. iu 1344, Its original value was 6s. 8d., but, it having increased to 10s. owing to the depreciation of silver, a new coin, called an 'angel '(q.v.), of the former value of a N., was issued by Henry VI. On one side of the N. was stamped a ship to commemorate the victory of Sluys.

Noblesville, a city, cap. of Hamilton eo., Indiana, U.S.A., on the White R., 21 m. N.N.E. of Indianapolis; has manufs, of earriages, iron goods, etc.

Pop. (1910) 5073, Nocera Inferiore, or Nocera del Pagani (ancient Nuceria), a tn. of Campania, Italy, in the prov. and 8 m. N.W. of the city of Salerno, on the R. Sarno. It is a bishop's sec, and

the R. Sarno. It is a bishop's see, and in the neighbourhood are the ruins of a medieval eastle. There are manufs. of textiles. Pop. (coun.) 28,000.

Nocera Umbra, a th. of Umbria, Italy, in the prov. and 20 m. E. of the city of Perugia. There are mineral baths. Pop. (est.) 8000.

Noceto, a com. of Italy, in the prov. and 6 m. W. of the eity of Parma, on the Recchio. Pop. 7500.

Nocturn. a division of the night.

Nocturn, a division of the night office in the Roman and other breviaries. Each N. in the present Roman breviary consists of three psalms and three lessons with their antiphons. The night office was, during the middle ages, said in the morning, whence its name of matins, but it is now said by anticipation on the previous evening.

Nocturne, in music a composition

a certain extent cnade.' The name

and character originated with Johu Field (1782-1837), but it is a form of composition which Chopin made peculiarly his own.

Noddy, a name meaning foolish and slow, sometimes given to Anous slolidus, a genus of tropleal terns. See TERNS.

Node, in hotany the joint of a stem, or part from which a leaf springs. See STEM.

are at least some sort of concrete expression of a nation's gratitude fer other celestial body are those two

plano: in the easo of the solar system, by the ecliptic. The straight line The straight line which joins these points is called the line of N. The point at which the orbit of a planet passes from under the ecliptic to above it is known as the ascending node, the other and opposite point necessarily being the descending node. The longitude of the ascending No. is one of the six 'elements' by which the movements of a celestial body are determined. Owing to the mutual attractions of the planets, the line of N. is continually shifting; alternately advancing and receding. The retrogression of planetary N. never exceeds one degree per century, but owing to the great attraction of the sun the lunar N. complete a revolution in about eighteen years and soven months. This evele. known point necessarily being the descending and soven months. This cycle, known as the Saros, was discovered by the Babylonian astronomers, who observed that the colipses of the sun and moon recurred in the same order in each cycle.

Nodier, Charles (1780-1844), a French author, born at Besançon. In 1824 he became librarian at the Bibliothèque de l'Arsenal; in 1833 he was elected to the Academy, and in 1843 made a member of the Legion of Honour. Hc was the centre of the early members of the Romantic School; Hugo, de Musset, and Sainte-Beuve all acknowledged his influence. His best work consists of his fantastic His dest work consists of his tancastic short stories, among which are: Smarra, 1821; Trilby, 1822; Histoire du roi de Bohême et de ses septs châteaux, 1830; La Fée aux Mettes, 1832; Inès de les Sierras, 1838. See Prosper Mérimée, Portraits historiques et littéraires, 1874; Francis Wey, Life, 1844.

1844. Noé, Amédée de, Comte, see CHAM. Noel, Sir Gerard Henry Uctred (b. 1845), a British admiral, born at Stanhoe, Norfolk. Ho was rearadmiral of the Mediterranean Fleet (1898-99). From 1900-3 he was in command of the Home Fleet and admiral-superintendent of the naval reserves; from 1904-6 commander-in-chief on the China station, and from 1907-8 at the Nore. He became 1907-8 at the Nore. He became Admiral of the Fleet in 1908. Was created K.C.M.G. in 1898, and K.C.B.

in 1902. Noel, Roden Berkeley Wriotnesiey (1834-94), an English poet and critic, was a son of the Earl of Gainsborough. Sir Bavy Dunce, Sir Bavy Dunce, Sir Baruaby Brittle He published: Behind the Veil, 1863; the Nurse in Not Beatrice, and Other Poems, 1868; The Jealousy, winning Red Flag, 1872 (2nd ed. 1883); Al nickname of 'Nurs Modern Faust, 1888; Poor People's Christmas, 1890; My Lea, and Other Poems, 1896; A Little Child's Monupal Caserta, Italy, 16 Naples. Giordano ment, 1881. His best known work was here. Pop. 15,000. written in memory of his sou, Eric.

points where its orbit is cut by a fixed | He also published a verse drama, The House of Ravensburg, 1877; Livingstone in Africa, 1874; Essays, 1886; and a Life of Byron, 1890, and edited a selection of Otway's plays and Spenser's poems. His Collected Poems were edited by his sister, Victoria

Buxton, 1902. Noetus (c. 130-c. 200 A.D.), a native of Smyrna; he became a leader of that branch of the Christian Church which embraced the doctrine called patriapassianism. He was a presbyter of the Church of Asia Minor, but his views led to his excommunication. His contemporary, Hippolytus, in his published Sermon against the heresy of a certain Nöetus, is the authority for his doctrines, which his disciple, Epigonus, preached at Rome.

Noeux-les-Mines, a com. in the dept. of Pas-de-Calais, France, 6 m. E.N.E. of Hondain; has coal mines, brass-foundries, and distilleries. Pop.

8300. Noga or Naga Hills, a dist. of Assam, India, consisting largely of unexplored jungle and mountain districts. Area 3070 sq. m.

Nogal, a river of Central Africa and Italian Somaliland, flowing S.E. into Bandal d'Agoa Bay from June till August.

Nogent-le-Rotrou, a tn. in the dept.

Nogent-le-Rotrou, a tn. in the dept. of Eure-et-Loir, N. France, 38 m. W.S.W. of Chartres by rail. Manufs. Woollens and leather. Pop. 3400. Nogent-sur-Marne, a tn. in the dept of Seine, France, on the r. b. of the Marne, 6 m. E. of Paris. There are important ehemical manufs. Pop. 12 000 12,000.

Noirmoutiers, an island of N.W. France, belonging to the dept. of Vendée. It is 12 m. long and 1 to 4 m. broad, with an area of 22 sq. m. It is fertile and has oyster fisheries. Chief

tn. Noirmoutiers. Pop. 8388.

Noisseville, a vil. of German Lorraine, 5 m. E. of Metz; the scene of a

defeat of the French by the Germans on Aug. 31 and Sept. 1, 1870.

Noisy-le-Sec, a tn. in the dept. of Seine, France, near the Ourcq Canal.

Pop. 11,000.

Nokes, James (d. 1692), an English actor. He first played at the Cockpit. in 1659 as one of the boys who habitually took women's parts. Among his favourite parts were: Sir Martin Marrall (in Dryden's play of that name), Sir Davy Dunce, Sir Credulous Easy, Sir Barnaby Brittle, Old Jordan, and the Nurse in Novil Payne's Fatal Jealousy, winning for himself the nickname of 'Nurse Nokes.'

Nola, a city and episcopal see of Caserta, Italy, 164 m. E.N.E. of Naples. Giordano Bruno was born

Nolana, a genus of hardy plants

(order Convolvulaceæ) of low growing | the defendants. habit, and sometimes grown on sunny beds and rockcries, especially near the sea.

Noldeke, Theodor (b. 1836), a German Orientalist, horn at Harhurg. His first work was a history of the Koran (1859), which won the prize of the French Académie des Inscriptions, and which he rewrote in German as Geschichte des Korans (1860). In 1861 he lectured at Göttingen: in 1868 ho was professor at Kiel, and from 1872-1906 professor of Oriental from 1872-1906 professor of the works languagee at Strasshurg. His works include Die Alltestamentliche Literatur, 1300; Geschichte acr Perser und Araber zur Zeit der Sasanden, 1879; Das Leben Mohammeds, 1863; Per-sische Studien (2 vols.), 1888-92; Sketches from Eastern History (Eng. trans.), 1892; Syriac Grammar (Eng. trans.), 1901.

Tangere, Noli me LUPIS. see. TUBERCLE.

Nolinsk, a tn. of Russia, in gov. and 62 m. S.S.E. of Vyatka. Pop. 5500. Nollekons, Joseph (1737-1823), a sculptor. In 1760 he went to study in Rome, where Garrick met him and commissioned him to execute a bust. This was so successful that Sterne sat to him. He increased his income by huying and selling antiques, and by stock exchange speculation, and was so successful that at his death he was worth £200,000. He returned to England in 1770, and was soon the fashionable sculptor of the day, and among his sitters were the members of the royalfamily and a great number of distinguished political and social personages. He was very successful in his husts. There is a biography, Nollekens and his Times, by John Thomas Smith, 1829 (reprinted, ed. by Edmund Gosse, 1894).

Nolle Prosequi, in legal practice an entry in the record of a court which indicates that the prosecutor plaintiff desires to proceed no further with the case. Formerly the practice in entering a N. P. applied both to civil and criminal suits, hut long ago it was superseded by motion for nonsuit for want of sufficient evidence, which practice was in its turn super-seded by a purely informal practice whereby the judge withdraws the case from the jury and directs judgment to he entered for the defendant, with-out or notwithstanding their verdict, where on the submission of counsel for the defendant he decides that there is no case for the latter to answer, and that no amendment of the pleadings will cure the defect. In criminal cases when an indictment (q.v.) has been found (see JURY), proceedings on it hereey by arriving at a trl-theistic can only be stopped by the crown doctrine of the Trinity. From then entering a N. P. against one or all of on N. was held to be heretical and

the defendants. It can only be entered on the fiat (q.v.) of the Attorney-General or Solicitor-General. It is, however, evon in criminal cases, rarely used, though technically it applies wherever the crown desires to stay proceedings against a prisoner in order that he may turn king's evidence (q.v.).

Nollet, Jean Antoine, Abbé (1700-

70), a French philosopher and physicist. He became a member of the London Royal Society (1734), and of the Académie des Sciences at Paris (1739). He was appointed to the newly instituted chair of experimental physics at the Collège de Navarre (c. 1753). His works include: Leçons de Physique expérimentale, 1743; Re-cherches sur les causes particulières des phénomènes électriques, 1749 and 1754; L'Art des expériences, 1770. See Nécrologe des Hommes célèbres de France; Nouv. Biog. Gén.

No Man's Land, the name applied outlying districts in various countries. It has been used especially to designate the following: (1) A region N. of Texas (Public Land Strip), ceded to U.S.A. in 1850, Strip), ceded to U.S.A. in 1000, constituting Beaver co., Oklahoma, since 1890; (2) a narrow district between Delaware and Pennsylvania island 3 m. S.W. of Martha's Vineyard, Massachusetts, to which it belongs; (4) the region corresponding to what is now Griqualand E., Cape of Good Hope; (5) a tract of

S. Australia, 80,000 sq. m. in area.

Nombre-de-Dios, a tn. of Mexico
state, and 32 m. L.S.E. of Durango.
There are rich silver-mines near. Pop. 6800.

Nome, a tn. on the S. of the Scward penineula, N.W. Alaska, on the N. shore of Norton Sound, 13 m. W. of Cape Nome. It is the centre of a great gold-mining dietrict, discovered in 1399. Pop. (1900) 12,483; (1910) 2600. Nomenclature, see Chemistry—

Chemical Nomenclature.

Nominalism as opposed to Realism, was one of the two doctrines of the middle ages. The two viewe of Nom-inalism and Realism were opposite, and aroso from a consideration of the nature of species and genera. N. implies a helief in the theory that universals, i.e. genera and epecies, are only

of qualit therefore, ... was general but names. A narrower form of N. held that even concepts or idcae are not really general. Roscelin in the 11th century was a great nominalist, but he brought N. under the han of the church as a

rational. rational. Abelard was a conceptualist (q.v.), but his conceptualism swayed really to N. and was also concemned by the church. Later in the 14th century William of Ockham upheld N., and among more modern philosophers Hobbes and Berkeley may be mentioned as upholders of modified forms of the doctrine. See CONCEPTUALISM, REALISM, SCHOLAS-TICISM.

Nomsz, Jan (1738-1803), a Dutch poet and dramatist. He wrote an epic poem on William I., Prince of epic poem on William I., Prince of Orange (1779). His tragedies include Maria van Lalain, which was very popular; Zoroaster; The Duchess de Coralli, and Cora. See De Vries, Hist. de la Poésic Hollandaise; Nouv. Biog. Univ.; Rose, New Gen. Biog. Dict. Nonze, or The Nones, in the Roman

calendar the fifth day of all months except March, May, July, October.

'March, July, October, May Make Noncs the 7th, Ides the 15th, day.

It was so called because falling on the ninth (nonus) day (reckoning inclusively) before the Ides, and marked the moon's first quarter. Cf. Kalende, Idus. See Smith's or Harper's Dict. of

Classical Antiq. under CALENDARIUM. Nonantola, a vil. of Emilia prov., Italy, 7 m. N.E. of Modena, on the

Panaro. naro. Pop. 6500. Non-Commissioned Officers.

CORPORAL. Nonconformity, refusal to conform to the dootrines and discipline of an established church. The term has been especially used in the case of dissent from the Church of England, and in this connection it denotes the whole body of Protestant dissent, including but rarely the Roman Catholic body in this country. important to notice that In the 17th century the word bore quite another connotation. It then signified the practice of those who, while remaining within the bounds of the Church. yet refused to conform to certain ceremonial practices, such as the wearing of the surplice, the sign of the cross in baptism, and the use of the ring in marriage. The rise of N in the present meaning of the term dates from the period immediately follow-ing on the Reformation. The first secession took place in 1563, and the opinions which had led to it spread rapidly throughout the Establishment, where their adherents wero known as Puritans. But their violence turned the anger of the state against them, and during the reign of Elizabeth they were visited with moro than one stern attempt at repression.

Abelard was a concep-|terians in Scotland, they expected more favourable treatment, but the issue of the Hampton Court Conference speedily convinced them to the contrary. Indeed, during the reign of James and his son, the royal power was wholly on the side of Episeopacy. Owing to this identification of king and bishop, the misgovernment of the king brought odium upon the Church as well as upon the throne, and the Puritan movement was correspondingly When, therefore, restrengthened. course was had to arms, the resentment of the parliament was directed against the Church as well as against the royal prerogatives, and the death of Laud soon followed that of his king. The supremacy of parliament was marked by a vigorous attack Episcopacy, at first in the interests of Presbyterianism but later in those of Independency. In 1643 the Westminster Assembly adopted the Solemn League and Covenant, which included an article for the abolition of prelacy. Two years later the use of the Book of Common Prayer was forbidden under heavy penalties, and the Directory of Public Worship was im-The Church of England was posed. eclipsed but not destroyed, and tho reaction which followed against the political system of the Commonwealth was directed also against Puritanism. Hence the Restoration of 1660 was followed by the passing of a body of legislation directed against Nonconformists. The Act of Uniformity (1662) was an attempt to remove from ccclesiastical benefices those Puritan ministers who had been intruded during the Commonweath period. It obliged all those who had not received episcopal ordination to do so, and rather than submit to this a large number of ministers, of whom the number has been variously estimated, quitted their benefices. Other Acts of the Clarendon Codo were directed to the repression of N. outside the bounds of the Church, such as the Conventicle Act (1664), which laid penalties upon all attending dis-senting conventicles, and the Five Mile Act (1665), which forbade Puritan ministers when travelling to come within 5 miles of a corporate town. The Test Act (1673), though directed principally against Roman Catholics, also pressed hard upon Protestant dissenters; and no satisfaction was felt by them at James II.'s Declara-tions of Indulgence (1687-88), for these, too, were obviously intended for the relief of Roman Catholics. A change came with the accession of William and Mary, and the Tolera-On the accession of James I., who tion Act of 1689 removed most of the had been brought up among Presby-disabilities imposed by the Clarendon

until 1828. The present Presbyterian Church of England was founded by Scottish Presbyterians in this country. and the continued immigration of and the continued immigration of Scotsmen has strengthened it considerably. In 1730 some attempt at combined action among the Nonconformist bodies was made by the non-corporate union of the three denominations, Baptists, Independent dents, and Presbytcrians. Outside this union the chief dissenting bodies were at this time the Quakers and the Unitarians. But by 1760 another important body was added to them on the secession of the Methodists from the Established Church. At the beginning of the 19th century the continued efforts of Nonconformists to secure the removal of the many disabilities under which they laboured began to meet with success, and this success has since steadily increased. The repeal of the Corporation and Test Acts took place in 1823; in 1836 marriage in a dissenting chapel was made legally valid; in 1871 an Aot was passed opening the universities to non-members of the Church of England; in 1880 Nonconformist ministers were allowed to conduct funerals in the parish burying grounds. A strong movement is at present to be seen among Nonconformists in the direction of union, though the general hostility to the Church can hardly be said to have diminished. A great step in the direction of union between the various bodies was the establishment in 1892 of the National Council of the Evangelical Free Churches. Nondweni, a vil. of Nqutu dist., Natal, S.E. Africa, 110 m. from

Natal, S.E. Africa, 110 m. from Durban, with gold and copper mines.

Non-effective is a term used in the British army and navy to describe the status of officers who are no longer on It includes all rethe activo list. tired officers and those on permanent half-pay, but not those who are on the unemployed supernumerary ' or tho

temporary half-pay' list. Nonius Marcellus, a Latin grammarian, probably of the 3rd and 4th centuries A.D. He is noted as the author of De Compendiosa doctrina . . ., valuable for the fragments preserved from old dramatists. Satirists and annalists such as Ennius, Cato, Varro, Priscian, and Fulgentius borrowed from this See editions of Junius (1565), Work. See entitions of Junius (1905), Gothofredus (1586), Mercier (1583, 1614, 1826), Gerlach and Roth (1842), Müller (1888), Onions, i.-ili. (1895), Lindsay (1903). Consult Peuffel and Schwabo, Hist. of Rom. Lit., ii.; Nottleship, Essays in Lat. Lit. (1885).

Code, though the Corporation Act volution of 1688 refused to take the and the Test Act remained in force oath of allegiance to William and until 1828. The present Presbyterian Mary. They were headed by William Sancroft, Archbishop of Canterbury, sand included seven other bishops, Ken of Bath and Wells, White of Peterborough, Lake of Chichester, Turner of Ely, Frampton of Gloucester, Thomas of Worcester, and Lloyd of Norwich. About four hundred dred of the lower clergy refused to take the oath, among them being many distinguished ecclesiastics. Some soon returned to the Established Church, but the body continued to exist with gradually diminishing numbers well on into the 19th century. See T. Lathbury's History of the Non-Jurors (1845), and J. H. Overton's The Non-Jurors (1902).

Non-Metals, one of the two classes into which chemical elements are di-Their characteristic physical vided. properties are as follows: they may be gases, liquids, or solids at ordinary temperatures, the liquid and solid N .-M. are easily converted into the gaseous state at comparatively low temperatures. They are brittle, if solid, generally have a low specific gravity, and are bad conductors of heat and clectricity. The chemical properties give a more definite test. The N.-M. always form acidic oxides, they are

always form acidic oxides, they are not acted upon by diluto mineral acids, and generally form stable com-pounds with hydrogen. Nonnenwerth ('Nun river island') or Rolandswerth, an island of the Rhine, in the Prussian dist. of Cob-lenz, near Königswinter. It is at the foot of the Drachenfels, 8½ m. from Bonn.

Non Nobis Domine, a canon by Willian Byrd (q.v.), is often sung in place of grace after dinners.

Nonnus, a Greek epio poct of the 5th century A.D. (fl. c. 410), a native of Panopolis, Egypt. His most noted work is the Dionysiaca (History of Bacchus). A Paraphrase of St. John is also extant (written in Greek hexameters). N. was probably a Christian. His Dionysiaca was edited by Gräfo (1819-26), by Marcellus (1856), by Köohly (1658). See Weichert, Dissertatio de Nonno (1810); Uwarrow, Nonnos (1817); Nacka, De Nonno Imitalore Homeri (1835); Janssen on his works (1903).

Nonnus (Nonus), Theophanes, a Greek physician of the 10th century (d. 959 A.D.). He dedicated his work Compendium totius Artis Medica to the Emperor Constantino Porphyro-Müller (1888), Onions, i.-iii. (1895), genitus (911-59). It was published by Lindsay (1903). Consult Pcuffel and Schwabo, Hist. of Rom. Lit., ii.; Nottleship, Essays in Lat. Lit. (1885). Proved form (1794-7) edited by Bernard. See Freind, Hist. of Physic, i.; Non-Jurors, those clergy of the Church of England who after the Re-

Non-Possumus (Lat., 'we cannot '), couver Is., British Columbia, Canada. a sort of Papal formula used to ex- It has deep water and is 10 m. wide. press refusal final and absolute, taken from the words of St. Peter and St. John (Acts iv. 19-20). It is said to have been used by Clement VII. in reply to Henry VIII.'s demand for a divorce from Catherine of Aragon.

Non-Suit. Technically a N.-S. no longer exists. Under the former practice N.-S. meant the voluntary abandonment by the plaintiff of his action. either because the judge or jury appeared to be against him or because in argument it appeared that in law he had no case. It differed from an adverse judgment in that it did not bar him from commencing the action again. In the days when forms of action, e.g. detinue (q.v.), trespass (q.v.), were so highly technical and the slightest verbal slip in the pleadings endangered the whole action, N.-Ss. were frequent, but since the legal reforms of the last century such unsubstantial formalities, and together with them N.-Ss., have been abolished. Popularly, the expression N.-S. is used to denote the fact of the judge having withdrawn a case from the jury either of his own motion or because counsel for the defendant has satisfied him that in law there is no case to answer or no evidence against his client (see also Nolle Prosequi). There is no formality to be observed, and the submission that there is no case can be argued at any stage of the proceedings.

Noodt, Gerhard (Geraert), (1647-1725), a noted Dutch jurist. He was professor of law at Francker (1679), at Utrecht (1684), at Leyden (1686), and rector of the university there. His works include Probabilia Juris Civilis

(1674-9); De Jure Summi Imperii
... (1705). Barbeyrao translated
two of his political treatises into
French (1707, 1714). His 'collected
works' appeared at Leyden in 1724, 1735, 1767 (the last two containing a Life by Barbeyrac.).

Nooniyak, or Nunivak, an is. 70 m. long, off Cape Vancouver, Alaska: the district is very hilly.

Noordwijk, a com. in the prov. of S. Holland, Netherlands, and is 5 m. N.W. of Leyden. Pop. 6302.
Nootka, or Moatcaht (Mowachaht), a tribe of the Aht, a division of the Wakashant (mod-letted of N American).

Wakashan ('good') stock of N. American Indians. They dwell on the W. coast of Vancouver Is., near Nootka Sound, and in S. British Columbia. They number only about 2500, many being professedly Christians. The Makaw or Kwakiuti, who settled in Washington area branch of the same Washington, are a branch of the same linguistio stock (Haeltzuk division).

Nopalea, a genus of succulents (order Cactacea). M. coccinellifera is the coclineal plant, and is cultivated in Mexico and the W. Indies as a food for the cochineal insects. It grows to a height of S to 10 ft. and bears scarlet flowers on leafless and spineless green

Norberg, a vil. in Central Sweden. owning iron and copper mines. It is 30 m. distant from Vesteras.

6360.

Norbert, St., was born in Picardy towards the end of the 11th century. In 1120 he founded the Premonstratensians, an order of Augustinian canons, and later became Archbishop of Magdeburg. He was canonised in 1584. See PREMONSTRATENSIANS.

Norcia, a com. and bishop's see of Italy, in the prov. of Perugia, 29 m. from Perni. Bricks, cloth, and Bricks, cloth, and manuf. Pop. 9600. earthenware are manuf.

Nord, the most northerly dept. of France, adjoining Belgium, and washed by the North Sea: formerly prov. of French Flanders. The greater part of the surface is flat, fertile, and well cultivated, watered by the Scheldt and the Sambre. The inhabi-tants are half Flemish, and half French-speaking Walloons. The chief agricultural products are whose, potatoes, sugar-beets, flax, chicory, and some tobacco. Stock-raising and and some tobacco. Stock-raising and and some tobacco. The agricultural products are wheat, oats, town of Valenciennes lies in the centre of the richest coal-field in France. N. is one of the leading manufacturing departments, making iron and steel goods, beet sugar, glass, chemi-cals, machinery, textiles, and porce-lain. Cap. Lille. Area 2228 sq. m. Pop. 1,961,780.

Norddeutscher Lloyd (North German Lloyd), a leading German steamship line, was inaugurated by Herr H. H. Meier, a citizen of Bremen, who in 1857 induced the various shipping industries of the town, the Weser Haute Steamship Company, the Unter Weser, and Ober Weser Steam Tug Companies, and the Ober Weser Universal Shipping Insurance Association, to amalgamate under the name of the N. L. In 1881 the first of the company's Atlantic service boats was built, and from that time until the present its prosperity has in-creased. From the headquarters at bromen, many lines of steamers run to New York, Baltimore, Brazil, Galveston, the R. Plate, etc. Im-perial mail steamers run between Bromen and Hamburg, Bremen and E. Asia, Bremen and Australia, etc. There is also a Chinese coasting trade Nootka Sound, a harbour of the of considerable magnitude. In 1891 Pacific Ocean, on W. coast of Vanthe company bad seventy boats,

Norden: 1. A suburb of Rochdale, Lancashire, England. 2. A tn. in the prov. of Hanover, Prussia, 4 m. from the North Sea coast. Pop. 6891.

Nordenfelt - Palmerantz Gun.

MACHINE GUNS. Nordenflycht. Hed wig Charlotta

(1718-63), a Swedish poetess, born at Stockholm. She founded the first Stockholm. She founded the first Swedish 'salons,' after the fashion of the 'salon' then popular in France, and under the names of 'Urania' and the 'Aspasia of Sweden' was the foundress and moving spirit of the Society 'Utile Dulci.' Her first publieation was Den Sörjande Turturdufran, an elegy on the death of her husband who died within a year of their marriage (1743). She published the poetical annual Qvinligt Tankespel. 1744-50, and among her other works are In Defence of IVomen, 1763; Solitude and Calm.

Nordenbam, a small German seaport, Oldenburg, Germany, on the i. b. of the Weser, 5 m. S.W. of Geeslemunde. Pop. 7836. Nordenskjöld, Nils Adolf Erik, Baron

(1832-1901), a Swedish geographer and explorer, born at Helsingfors, Finland. In 1853 he went to study the iron and copper mines at Tagilsk, and was appointed lecturer at the university on his return, but was dismissed on account of his political views in 1855, when he went to Berlin. In the following year he won the travelling stipend of the University of Helsingfors, and in 1857 took his master's and doctor's degree. He was, however, obliged to leave the city again on account of his polities, and deprived of the right of holding office the university, whereupon settled at Stockholm. He afterwards made several noteworthy voyages in the Arctic regious with Tonelli in 1861, 1864, 1867, 1872, and 1875-76. In 1878-79 he made the North-Eastern passage, starting from Karlskrona. On his return to Swedeu he was made a baron and commander of the Order of Nondsjeuns. In addition to his exploration he made a valuable contribution to the science of geographical research, particularly in his work Perillus (1897). He died at Stockholm.

Nordenskjöld Sea, the name given to that part of the Arctic Occan which washes the shores of the Taimyr Peninsula and New Siberian Islands.

Norderhov, a com. in the prov. of uristiania. S. Norway, situated Christiania, S. Norway, situated between the Tyri Fjord and the Rauds Fjord. Pop. 8500. Norderney, the most important of

the E. Frisian islands, in the North Sea, belongs to the Prussian prov. of for the boating, annual regattas

whilst in 1910 it had 176, aggregating | Hanover. It is 8 m. long, 11 m. broad, 752,037 tons. | with an area of 8 sq. m. It is the most popular of German seaside resorts. the average annual number of visitors

being 25,000. Pop. 4261.
Nord Fjord, an inlet on the W. eoast of Norway extending for about 50 m. inland; it enters the sea by two mouths, the Faa Fjord and the Fröi Fjord. The scenery is beautiful.

Nordhausen, a tn. of Prussia in the prov. of Saxony, 60 m. from Halle, with distilleries and numerous mauufactures. Pop. 32,582.

Nordkyn Cape, 45 m. E. of North Cape, in 71° 5' N., is the most uor-

therly point in Europe.

Nördlingen, a tn. in Bavaria, situated on the Eger, and 40 m. distant from Augsburg by rail. It was at one time a free city, and is still shut in by walls and towers. Among the various objects of interest are some paintings by Hans Schäufelein, a tower 290 ft. high, and a town hall in late Gothio style, Pop. 8706.

Nordmaling, a com. in the prov. of Vesterbotten, Sweden, ou the Gulf of Botbnia, 33 m. S.W. of Umea. Pop.

10,172.

Nordre-Bergenhus, a prov. of Norway on the Atlantic. Area 7136 sq. m. Pop. 89,972.

Norder-Trondhjem, a prov. of Norway, between Sweden and the Atlantic. Area \$696 sq. m. Pop. \$4,993.
Nore, The, a sandbank at the mouth of the R. Thames, marked by several buoys and by light-ships with revolving lights, to warn ships from approaching too elosely. The Nore light floats over the E. cud of the saudbank 4 m. N.E. of Shecr-Mr. Hamblin placed the first ere in 1731. The eclebrated light here in 1731.

Norfolk: 1. A maritime co. of E.

Nore Mutiny occurred in the vicinity in 1797.

England, on the North Sea. The coast-line is mainly flat and low, though in places the cliffs reach the height of 200 ft. In parts the sea has much eneroached, though near Lynn land has been reclaimed. There are fcw inlets, and owing to the numerous sandbanks the coast is dangerous. Yarmouth and Lynn are the principal ports. The fine elimato and long stretches of sand have made Yarmouth, Cromer, Hunstanton, etc., favourite watering-places. The surface is for the most part level, and includes in the W. part of the Fen Country (q.v.) known as the Bedford Level. The principal rivers are the Yare and the Great Ouse, with their tributaries. One of the chief features of the county is the Broads (q.v.), a series of beautiful lakes famous for their fishing and water fowl, and also

being held. Building stone, local known as 'Gingerbread Stone' quarried at Snettisham and the neighbourhood, clay is dug for brioks and tiles at Hunstanton, Snettisham, etc.; limestone is quarried at Marham, and flints are worked for facing walls, The soil is extremely varied: chalk, sand, and loam being prevalent in different districts. Agriculture flourishes; oats, wheat, and barley being grown in great quantities. Cattle are extensively reared, and the green crops consequently include turnips and swedes; beans are also grown, and some fruit. The principal manufs. are cloth (worsted having taken its name from Worstead), silk and wool weaving, and boots and shoes. There are a number of flourmills and mustard works; agricul-tural implements are made; tanning, malting, and brewing are also carried on; and there are fisheries at Yarmouth. Sandringham is a royal country seat, and there are many fine churches, especially the beautiful Norman cathedral at Norwich (q.v.). Norman cathedral at Norwich (q.v.), originally part of a Benedictine monastery. At Castle Rising there is a fine Norman clurch and also the ruin of a Norman castle, while Norwich Castle is still in good preservation. The county originally formed part of East Anglia, and suffered many incursions from the Danes. The county is divided into thirty-three hundreds. and six parliamentary divisions, each and six parliamentary divisions, each returning one member. The area is 2018 sq. m. Pop. 488,630. See W. A. Dutt. Norfolk: and Victoria County History, Norfolk. 2. A city and port of Norfolk co., Virginia, U.S.A., on Chesapeake Bay. It exports coal, cotton, lumber, and tobacco, and manufs. hosiery, eotton, silk, and machinery. It also has a large trade in peanuts. Pop. (1910) 67,452. 3. Atn. of Madison Co., Nebraska, U.S.A., Atn. of Madison co., Nebraska, U.S.A., 96 m. N.N.W. of Omaha. Pop. 6025. Norfolk, Henry Fitz-Alan Howard,

fifteenth Duke of, see Howard.
Norfolk, Hugh Bigod, first Earl of (d. 1177 or 1176), received his earldom as a reward for his assistance to Stephen in obtaining the English erown. He was noted for his treachery and double dealing, even in the faith-less age in which ho lived. In 1169 he was one of the nobles excommunicated by Becket, and in 1175 was obliged to forfeit his castles. He is

being ambassador to France on one new star was recognised by Mrs. occasion. He retained his power Fleming on a photograph taken by during John's reign, save for a short Bailey (1893).

Building stone, locally interval in 1213, but was excom-Gingerbread Stone' is mnnicated by Innocent II. as one of the twenty-five executors of Magna Charta. On the accession of Henry III. he regained his honours, and his hereditary right to the stewardship of the Royal Household was recognised.

Norfolk, Roger Bigod, fourth Earl of (d. 1270), marshal of England, was one of the members of the party of reform in opposition to Henry III. He was ambassador at the Conference of Cambray in 1258, but in the following year the dissensions of the barons caused him to transfer his allegiance to the side of the king. In 1265 he was one of the five earls summoned to the parliament.

Norfolk, Roger Bigod, fifth Earl of (1245-1306), marshal of England, was one of the leaders of the nobles in their struggle against Edward I. He and Bohun, Earl of Hereford, were foremost in refusing to go on foreign

foremost in refusing to go on foreign service unaccompanied by their sovercign. In 1297 they secured the Confirmation of the Charter, which was ratified by Edward at Ghent, and in 1301 signed by him in person. Norfolk Island, in Pacific, about 400 m. N.N.W. of New Zealand, was first discovered by Captain Cook in 1774, and was shortly afterwards made a penal settlement. Then it was accupied by the Pitcairu islanders. occupied by the Pitcairn islanders, who, however, soon deteriorated, owing to intermarriage. The island is now under the control of New South Wales, and is the headquarters of the Melanesian Mission, which was inaugurated in 1867. The island is or soil is fertile, yielding fruits of all kinds, such as oranges, lemons, figs, grapes, pine-apples, etc. The Norfolk pine (Araucaria excelsa) (q.v.) is a lofty tree, growing to a height of 200 ft. and measuring 30 ft. in breadth. The coast of the island is steep and rugged, and the highest peak is Mt. Pitt (1050 ft.).

Norham, a par. of Northumberland, England, on the r. b. of the Tweed, 7½ m. S.W. of Berwick-on-Tweed. It has a ruined castle. Pop. (1911) 700.

Noricum, in ancient geography, was a territory which became converted by Cæsar into a prov. towards the end of the first century. It corresponds . to the present provs. of Salzburg, Carinthia, and Styria. Norma (the Rule or Square), a

supposed to have died in Palestine.

Norfolk, Roger Bigod, second Earl of (d. 1221), was the son of the first small and unimportant southern confearl of N. During the reign of Henry stellation, catalogued by La Caille, II. he had small power, but he was in favour during all Richard's reign, other stars between 4-6 and 5-5. A hearng arbaces due to France on one provided in the stars between 4-6 and 5-5. A new stars was recognised.

line drawn from any point on a ourve, in its plane, at right angles to the tangent at that point, or a live drawn from any point on a curved surface at right angles to the tangent plane at that point.

Normal Schools. seeTRAINING COLLEGES.

Norman, Sir Henry (b. 1858), a traveller and author, born at Leicester. A great traveller, having visited China, Japan, America, Russia, and many other countries. He was made secretary of the Budget League in assistant 1909, and assistant postmaster-general in 1910. Amongst his pub-lished works are: An Account of the Harvard Greek Play, 1881; The Preservation of Niagara Falls, 1882; and The Real Japan, 1892, etc. Norman, Sir Henry Wylie (1826-1904), an English field-marshal. He and postmaster-

took an active part in the Indian Mutiny, being present at Delhi, and at the relief of Lucknow. He was made governor of Jamaica in 1883; governor of Queensland in 1883, and governor of the Royal Hospital, Chelsea, in 1901. He was made a field-marshal in 1902.

Norman Architecture, sec ARCHI-TECTURE—Norman.

Normanby, a tn. in the N. Riding of Yorkshire, 3\frac{1}{2} m. S.E. of Middles-brough. Has ironworks, and manus, bricks and glass. Pop. (1911) 10,003.

Normanby, Marquises of, see SHEF-FIELD, JOHN, and PHIPPS, CONSTAN-TIME HENRY; PHIPPS, GEORGE

AUGUSTUS.

Norman Conquest (1066-69). This movement really originated in the aecession of Edward the Confessor to the throne of England. This prince had spent the greater part of his life in Normandy before his accession to the throne of England. On the ex-tinction of the Danish dynasty he had been recalled to the throne of England as the nearest representative of the Saxon line. His early cducation made him particularly susceptible to Norman influence, and during the greater part of his reign a constant intrigue went on between Norman and Saxon court parties for the succession to the throne. Towards the end of his life he came under the influence of the Saxon party, and finally nominated Harold Godwinson as the heir to the crown. Before his death, however, the following jucidents had taken place. During

Normal, in geometry, is a straight lease until he had sworn an oath that plane, at right angles to the agent at that point, or a liue drawn on any point on a curved surface at ght angles to the tangent plane at point.

Normal, Schools are Transpord. landed at Pevensey Bay in Oct. 1066, and was met at Hastings by Harold's army, which had already practically worn itself out at the battle of Stamford Bridge and by the hurried The Normans were vicmarch S. torious, and Harold was slain. It is impossible to enter into the details of the actual conquest here, but we can safely say that by 1072 England lay conquered at the feet of William. The Normans became the owners of the land, and the Saxons were treated—at first, at any rate—as a conquered race. But the continental wars in which the Normans were constantly engaged rendered them increasingly dependent on English cooperation, and estranged them in an equal degree from their former compatriots in France; so that within two centuries the distinction between Norman and English was obsolete in England. At the same time, both English blood and English manners were improved by mixture with a higher civilisation; while the perfection to which the ruling race had brought their feudal system helped to strengthen the central power and to unify the nation. See WILLIAM THE CONQUEROR.

Normand, Mrs. Ernest (née Hen-rietta Rae) (b. 1859), an English palnter, born in London. She ex-hibited her first picture in the Royal Academy when twenty-one. She has received medals from Paris and the Chicago Exhibition. Amongst her later pictures may he mentioned the fresco in the Royal Exchange (1900), 'Abelard and Heloise,' 1908; and Hylas and the Water Nymphs, 1910.

Normandy (Fr. Normandie), formerly a prov. in the N. of France bordering on the English Channel, now divided into the depts, of Seine ilvados, and very fertile.

esembling a garden in many districts. Its chief agricultural products are corn, flax, and fruits (from which cider is largely made); its fisheries and manufactures of great importance, and its horses the hest in the kingdom. The prinweights had taken place. During the less in the kingdom. The printer the temporary exile of the Godwins, cipal towns are Roucn, Dioppe, William the Bastard had visited Havre-do-Grace, Harfleur, Honfleur, Edward and alleged that he held from Caen, Falaiso, St.-Lo, Bayeux, Couhim a promise that on his (Edward's) tances, Avranches, Alençon, Cherdemise he should come to the throne bourg, and Mont-St.-Michel. In the of England. He had also held Harold time of the Romans the country hore a prisoner and had refused him re-the name of Gallia Lugdunensis II. formed a part of Neustria, and was first called N. after Charles the Simple, in 912, had given it to Rolf or Rollo, the leader of a band of Norrotten, the largest and most Norse rovers (see Norsemen), to be held by him and his posterity as a fief of the French crown. His descendant, William II., son of Robert II., became Duke of N. in 1036, and in 1066 established a Norman dynasty on the throne of England (see WILLIAM THE CONQUEROR). In 1077 his claest son, Robert, wrested N. from him, but it was again united to England under Henry I. in 1105. Henry II., tho son of Henry I.'s daughter, Matilda, after the death of Stophon of Blois, obtained in 1154 the government of England and N.: but in the reign of his son, John Lackland, it was conquered by Philippe Auguste (1203-4). It remained a portion of the Franch of the Principle of the Princip the French monarchy for more than 200 years, but after the battle of Agincourt (1415) it was reconquered by the English, who held it till 1449, when it was finally wrested from them by Charles VII. See Felice's from See Felice's

La Basse-Normandy, 1907.
Norman-French, a French dialect which originated after the settlement of the Scandinavian invaders, under Rollo, in Normandy, about 911. It was introduced into England at the Conquest, and is known as Anglo-French, differing from N. as spoken in Normandy by the use of Saxon words for ideas for which there was no French word. N. was the language of the court for several centuries, and was used for law reports until the middle of the 16th century. In 1362 a statute ordained that pleadings should be in English, but should be enrolled in Latin, but the language of the statute book was still French in 1483. The carliest important law treatise in N. is Britton (1291) and the latest Littleton (1291) a considerable latest Littleton (1481). A considerable an English novelist. Ho was called to amount of literature, noetry, and amount of literature, poetry, and prose in N. has been preserved. Skeat, Principles of English Etymology (2nd series), 1891.

Norman - Neruda, Madame,

HALLE, LADY.

Normanton, a tn. in the W. Riding of Yorkshire, situated on the Calder, 24 m. from York. Besides an old Norman church, there are traces of a Roman encampment in the vicinity. Pop. (1911) 15,033.

Normanton, South, a par. of Derbyshire, England, 64 m. from Mans-field. Pop. (1911) 5200. Norns, in Scandinavian mythology,

is the name given to three maidens who symbolise the past, present, and future, and are called Urd, Verdandi, and are also occupied in watering the shipbuilding yards. Pop. 46,000.

Under the Frankish monarchs it | root of Igdrasil, the tree of life, by

Norrbotten, the largest and most nortberly prov. in Sweden. Area 40,870 sq. m. Pop. 159,000.
Norris, Frank (1870 - 1902), an

American novelist, born at Chicago. He was at one time war correspondent out in S. Africa for a San

Franciscan journal. His novels include: The Octopus: The Pit; Blix; MrTeague; and A Deal in Wheat.
Norris, John (1657-1711), an English writer and poet, born at Collingborne-Kingston, in Wiltshire. He was rector of Payerter (Alberta Dearston). rector of Beinerton Church, Salisbury, for twenty years. H He was an idealist and a student of Plato and His published works Malebranche. His published works include: An Essay towards a theory of the Idealor Intelligible World; Poems and Discourses; Reason and Religion, and Discourse concerning the Natural Immortality of the Soul.

Norris, Sir John (1660?-1749), a He distinguished British admiral. himself under Shovell in the battle off Malaga (1704) and in the taking of Barcelona in 1705, for which services he was knighted, as well as receiving a sum of 1000 guineas. In 1739 he was appointed admiral and commander-in-chief of the English fleet. He retired from activo service in 1744.

Norris, Newman, Lt.-Col. Charles, L.W.M.(b.1852), was born at Elvington Hall, Yorkshire, and has rendered valuable services both abroad and at home by means of his sword and his pen. He served under General Gordon in Egypt, was present at the campaigns in the first Transvaal War, in Basuto-land, Matabeleland and Central Africa. He has been war correspondent on several occasions, and has won many

medals and military distinctions.
Norris, William Edward (b. 1847),

among which Yellow, 1876; 1897; The The

Nature's Flower of the Flock, 1900; Comedian, 1904; Harry and Ursula, 1907; Pauline, 1908; Not Guilty, 1910, etc.

Norristown, a bor. of Montgomery eo., Pennsylvania, U.S.A., on the Schuylkill R., 18 m. N.N.W. of Philadelphia. There is a good trade in textiles. Pop. (1910) 27,875.

Norrköning a to and port of

Norrköping, a tn. and port of Sweden in Ostergötland, 113 m. from Stockholm, on both banks of the R. Motala. The town is quite modern in appearance. There are modern in appearance. cloth and cofton mills as well as Norrland, one of the three terri-tories of Sweden, and includes the counties of Norrbotten, Vesterbotten, Vesternorrland, Jämtland, and Gefle-

borg. Area 98,771 sq. m.

Norsemen, in the strictest sense of the word, denotes the early dwellers in Norway: but the application of the term is sometimes extended to all the people of Scandinavia. These people, who began to leave their own country on plundering expeditions about the middle of the 5th century, were more or less compelled to do so by the existing conditions. The country was over-populated, and a warlike career was attractive while the men of power subdued their less fortunate brethren. These combined factors were, in a large measure, responsible for the large measure, responsible for the Norse invasions of Europe which began on the E. coast of England in the year 787. Known to the English as 'Danes,' they were almost subdued by Aifred the Great; but they conquered this country early in the 11th century, under Cnut. It was about the beginning of the 9th century that they also visited the islands off Scotland, including the Hebrides, Orkeye, and Shetland. In Ireland they ney, and Shetland. In Ireland they were also very powerful, and about \$40 were masters of most of the northern part of that country, founding their kingdom of Dublin. They extended their Inroads to the Faroe Isles and Iccland about the end of the 9th century, and eventually visited Green-land and a place called Vinland, which was possibly a locality somewhere on the Canadian coast. They likewise met with success on the Continent, and during the first half of the 9th century pillaged the land of the Frisians and Flanders. In the year 843 they established themselves on the R. Loire, and a few years later had planted camps on most of the French rivers. They obtained posses-sion of Paris in \$45 (sacking the city), and again on three later dates. 859 and 860 they sailed into the Mediterranean Sea, attacking Spain and the islands near and settling on tho A short time after they R. Rhône. arrived in Italy, and continued to plunder towns. In the year 912 Rollo was made by the French king the owner of the duchy of Normandy (q.v.); it was from this that the future conquerors of Eugland had their beginning. See Georg B. Depping, Histoire
des Expéditions Maritimes des Normands et de leur établissement en
France au dixième siècle, 1826; O.
Delarc, Les Normands en Italie, 1883; demand for high literature, and paved
1889; C. F. Keary, The Viking Age,
1889; C. F. Keary, The Vikings in
1886, 1891; I. Fischer, Die End deckungen der Normannen in Amerika, 1902. it was from this that the future con-

North, Christopher (Seottish author), see Wilson, John.

North, Frederick, second Earl of Guilford, better known as Lord North (1732-92), a statesman, entered parliament in 1754, and was a Junior Lord of the Treasury from 1759 until 1766. in which year ho became Joint-Paymaster of the Forces. Iu 1767 he became Chancellor of the Exchequer and Leader of the House of Commons in the Grafton administration, and three years later he became Prime Minister. In that high office he acted as the mouthpiece of the king, who as the mouthpiece of the king, who ruled the House of Commons by bribes and threats, and, by appeals to his loyalty, induced N. to carry out his will. N. was opposed to the American War, but allowed the king to influence him against his better to influence him against his better judgment. He resigned in March 1782, but with Fox formed a government which endured from April to Dec. 1783, after which he did not again hold office. He succeeded to the carldom in 1790. An able financier, he was a weak man, and responsible for much of the troubles that arose in the earlier years of the reign of George III.

North Adams, a city of Robbits

North Adams, a city of Berkshire co., Massachusetts, U.S.A., on the R. Hoosac, 52 m. N.W. of Springfield. It carries on woollen manufactures as well as a boot and shoe trade. Pop.

(1910) 22.019.

Northallerton, a market tn. in the N. Riding of Yorkshire, 40 m. N. of Leeds. It is the site of an old Roman the 12th century. Leather goods, linoleum, and motor cars are manufactured. Pop. (1911) 4806.

Northam: 1. A par. of Dovonshire, England, 1½ m. N.W. of Bideford. Pop. (1911) 5500. 2. A tn. in York co., W. Australia, 54 in. E.N.E. of Perth. Pop. 2000.

North America All Saints' Church dates from

Alaska, Canada, and United States OF AMERICA.

North American AMERICAN INDIANS. Indians.

North American Review. This celebrated critical review, which is reputed to bo the oldest magazine in the world, was the lineal successor of The Monthly Anthology, which was begun by Phineas Adams in 1803, and which shortly after passed into the control of the Rev. William Emerson, the father of Ralph Waldo Russell Lowell (1862-72), who used the Review as the medium of publication of most of his prose writings. Other editors have included a U.S. Secretary State, two ministers to Great Britain and Spain, and ministers to Russia, China, Brazil, and the Nether-lands, together with two presidents of Harvard College. It claims without injustice to he tho recognised channel in America for the most comprehensive discussions of important public questions: a character which it acquired under the cditorship of Alleu Thorndyke Rice, who purchased it in 1877, and was editor for twelve years. Rice drew his contributions not, as his predecessors had done, from American writers only, hut from every part of the world. The great religious con-troversy between Cardinal Manning, Gladstone, and Colonel Ingersoll; the argument between Gladstone and Blaine on the rival merits of free trade and protection: the dehate between Edison, Westinghouse, and Lord Kelvin on the possible dangers of distributing electricity through cities for lighting purposes; the Homo Rule controversy between Parnell and Mr. Balfour, were all discussed by their great advocates in the N. A. R. Its present editor and proprietor. Colonel George Harvey, has occupied that position since 1899. Northampton: 1. Cap. of the co. of

the same name, a market tn., and parl. co. and municipal bor., on a rising ground on the l. h. of the Nen, 67 m. N.W. of London hy railway. In the ceutre of the town is a spacious market square. The principal edifices are the shire hall, the grammar school, the town hall, the corn exchange, the numcrous churches, several of which are unusually interesting, as St. Peter's, a restored and heautiful specimen of enriched Norman, and St. Sepulchre's, one of the very few round churches in the empire, and supposed to have been built in the 12th century. Boot and shoe making is the staple industry. Leather, hosicry, and lace are manufactured. Iron aud brass foundries are in operation, and hrewing is carried on. Races take place here every year in

N.W. of Holyoke. It has manus, of silk, hrushes, outlery, etc. There are the Smith (... in the Burnham - !!out in the Clarke Sch. i. .. i. .. i. i. i. i. the Clarke Sch. i. .. i. .. i. i. i. .. city. Pop. (1910) 19,431, 3. A post tu in the Victoria dist. of Western Australia, 262 m. N.N.W. of Perth. Pop. 1500 1500.

Northampton, Spencer Joshua Alwyne Compton, second Marquis of (1790-1851), an English man of letters and politician, horn in Wiltshire. In 1812 he entered parliament, and was associated with Wilherforce in the anti-slavery campaign; healso assisted Sir James Mackintosh in his efforts towards the reform of criminal law. In 1820 he retired to Italy to live, in 1828 he became the second Marquis of Northampton on the death of his father, and in 1830 he returned to England. From 1838 to 1849 he was president of the Royal Society; he also filled the same post in the Geological Society for some time. published a volume of poems.

published a volume of poems. Northampton, William Parr, Marquis of (1513-71), was the brother of Catherine Parr, the sixth wife of Henry VIII. He was created Earl of Essex in 1543 and Marquis of Northampton in 1547. He played an important part during the reign of Edward VI., supporting the cause both of Somerset and Northumberland. On the death of Edward VI, he favoured the accession of Lady Jane favoured the accession of Lady Janc Grev, and as a consequence was condemned to death, but the sentence was afterwards commuted to the forfeiture of his titles and estates. On the accession of Elizabeth he was again taken into favour and was created marquis for a second time in 1559.

Northamptonshire, a midland co. of England. The surface is mainly level or broken with low hills, and the scenery is beautiful and well wooded, the county being famous for its trees. It includes part of the Fen country (q.v.), what is known as the 'soke' of Peterborough being land reclaimed from the Fens. The principal rivers are the Avon, Neue, Welland, Cherwell, Leam, and the Ouse. Ireustone, limestone, and clay are worked, and a particular kind of huilding-stone known as Weldonor Stamford marhle. March. Two members are returned to the House of Commons. N., a addition to a rich soil, are admirable very ancient town, was held by the for agriculture, and almost the whole Danes at the heginning of the 10th century, and was hurned by them in 1010. After the Conquest, it was hest and harley heing the principal crops, stowed on Simon de St. Liz. In the 17th century it suffered from flood and tensively. Apart from agriculture the

North

main industries are the iron works Worcester. It is ongaged in the carried on at Kettering, Wellinghorough, etc., and the manufacture of 8809. hoots and shoes, Northampton heing the centre of the trade for England. The county is divided into four parliamentary divisions, each returning one member. It was originally included in the Mercian kingdom, and was part of Tostig's earldom in the 11th cen-tury. Earthworks and Roman remains have heen found, and Watling Street and Ermine Street hoth cross the county. In 1215 the harons hesieged Northampton Castle, held hy King John, and in 1624 the castle was wrested from the younger Simon de Montfort by Henry III. Henry VI. was defeated at Northampton during the Wars of the Roses, and later the famous hattle of Nasehy (1645) took place in the county. There are few monastic remains, the most important heing the Ahhcy Church of Peterhorough (Medeshamstede), now tho cathedral (Norman), commenced hy Penda in 665; hut there are some beautiful churches of Norman date. The ruins of Fotheringay Castlo, so famous in connection with Mary Queen of Scots, are also in the county. The area is 909 sq. m. Pop. (1911) 363,892. Sce Victoria County History, Northamptonshire.

North Andover, a tn. in Essex co., Massachusetts, U.S.A. The chief trade is in wool and machinery. Pop. (1910)

5529.

North Attleboro, a tn. of Bristol co., Massachusetts, U.S.A., with important jewellery trade. Pop. (1910) 9562. North Australia, see NORTHERN

TERRITORY.

North Bay, a tn. and watering-place of Ontario, Canada, on Lake Nipissing, 190 m. N. of Toronto. Pop. 4000.

North Berwick, a seasido resort and royal hor, of Scotland, in Haddington co., 22½ m. (by rail) E.N.E. of Edin-hurgh. It has become popular as a watering-place, having a good beach and fishing, and two fine golf courses. It was made a royal hurgh by Robert III.; the ruins of a Cistercian ahhey founded by David I. are in the neighbourhood. One mile to the S. is the hill called North Berwick Law, rising to 612 ft.; 3 m. to the E. of the town are tho ruins of Tantallon Castic (14th century), whilst 2 m. to the S.W. is Dirlcton Castle (12th century). Pop. (1911) 3247.

North Brabant, see BRABANT.
North Braddock, a bor. of Pennsylvania, U.S.A., in Allegheny co., o m.
S.E. by E. of Pittsburg. There are manufs. of steel rails. Pop. (1910) 11,824.

Northbridge, a tn. in Worcester co., Massachusetts, U.S.A., 11 m. S.E. of

North British Railway Company was incorporated in 1844 for running a railway hetween Edinhurgh and Berwick; since then it has amalgam-ated with about fifty companies. The lines run from Edinhurgh to Carlisle on the S., to Glasgow on the W., to Fort William on the N.W., and to Dundee, Montrose, and Bervie on the N.E. The total length of line is 1243 m. exclusive of 281 m. owned in conjunction with other companies; the company also owns a small fleet of steamers. The Forth and Tay hridges were originated by the company. The number of directors is sixteen. The authorised capital, including loans, loans, is £68,685,089, of which £19,418,131 represents the nominal increase of capital resulting from the conversion and rearrangement stocks. The company's offices are at 23 Waterloo Place, Edinburgh.

Northbrook, Earl of, see BARING.

North Cachar, a dist. of Assam, India. Area 1800 sq. m. Pop. 40,000. North Cape, a headland on tho Island of Magero, Norway. It is, with Knivskiarödde, which is slightly farther N., the most northerly point of Europe, being in lat. 70° 11' N. The most northerly point on the Continent

most northerly point on the continual itself, however, is Cape Nordkyn.

North Carolina, a South-Eastern Atlantic state of U.S.A. The state is divided topographically into three distinct zones: the Coastal Plain Region in the E., the Piedmont Plateau Region in the centre, and the Appalachian Region is the W. The Coastal Plain is fringed by a margin Coastal Plain is fringed hy a margin of swamps and shoals which are ex-tremely treacherous to navigation. The largest of these swamps is known as Dismal Swamp. The Coastal Plain is remarkably level. The Piedmont Plateau Region is bold and somewhat rugged in contour. The chief ranges of the Appalachian Mt. Region are the Blue Ridge and the Unaka Mt. Range. The highest peak of the Unakas is Mt. Mitchell (6711 ft.). The mountains of this region are for the most part clothed with dense forests. The scenery is exceptionally beautiful, and attracts numerous southerners in summer and northerners in winter, The soil is uniformly fertile, and the climate healthy. The minerals of climato healthy. The minerals of N. C. are exceptionally rich, and luclude iron, copper, silver, lead, zinc, coal, granite, marble, gems, etc. The chief products are cotton, wheat, oats, maize, tobacco, and potatoes. N. C. is sometimes called the turpentine state owing to the large quantities of turpentine which it experts. Tar and rosin are also flourishing trades.

factured, and the manufacture of silk is prospering. Fisheries in the state are valuable. The capital of the state is Raleigh, and the chief port and largest city is Wilmington. The population consists of Americans, English, Germans, Negroes, Indians (Cherokees), and Chinese. Area 52,426 sq.m. Pop. (1910) 2,206,287.

Northcliffe, Baron, see HARMS-WORTH, ALFRED CHARLES WILLIAM. Northcote, Henry Stafford, Baron Northcoto of Exeter (1846-1911), a statesman, was the second son of Sir Stafford Henry Northcote, first Earl of Iddesleigh. He entered the Foreign Office in 1868, and on various commissions acquired considerable experience. In 1877 he hecame private secretary to his father, then Chancellor of the Exchequer, and in 1880 became a member of parliament. He held minor appointments until 1900. when he was raised to the peerage and made governor of Bombay, in which position he greatly distinguished himself. The Commonwealth of Australia was formed in 1901, and three years later N. went out as

Northcote, James (1746-1831), an English painter, born at Plymouth. In 1773 he hegan his studies under Sir Joshua Reynolds, and at the Royal Academy schools. He went to Italy in 1777, and on his return to England he became famous as a portrait painter. In 1786 he was elected Assopainter. In 1786 he was elected Asso-ciate of the Academy, and his historic picture, 'The young Princes murdered in the Tower,' was completed in that year. This was followed hy 'The Burial of the Princes' and 'The Death of Wat Tyler.' 'The Entomb-ment' and 'The Agony in the Gar-den' are among his last works.

Northcote, Sir Stafford, see IDDES-

LEIGH.

governor-general.

North Dakota, a N. central state of the U.S.A. The physical features of the state are hold and simple. Three vast table-lands rise successively from E. to W. Through the nethermost of these table-lands flows the Red R. Its mean hreadth is 50 m., and its mean elevation is 900 ft. The second table-land has a mean breadth of 180 m., and a mean elevation of 1400 ft. In this plain are situated the Turtle Mts., which have an elevation of 400 ft. above the general level. The third and most westerly table-land is called the Coteau du Missouri, and covers half of the state. Its mean elevation is 27,000 ft. Its plateau is watered by the Missourl. Many of the coal seams in the Coteau du Missouri have hecome ignited through prairie fires, and emit smoke and fumes. Devil's Lake, or Minniwaukon, in the N.E., has no

Cotton and woollen goods are manu-joutlet, and is salt. The valley of the Red River is very fertile, and produces fine wheat crops. Other crops are oats, maize, flax, rye, potatoes, buck-wheat, and hay. Cattle abound in the state ranches. The rainfall in the state ranches. The rainfall is low. The winters are cold but sunny. The cap. of N. D. is Bismarck; the largest town is Fargo. Area 70,795 sq. m. Pop. (1910) 577,910.

sq. m. Pop. (1910) 577,910. North Eastern Railway, one of the most important railways of England, originated in 1854; the York, New-castle, and Berwick Railway, the York and North Midland Railway, and the Leeds Northern Railway being then amalgamated under the above title. The Stockton and Darlington Railway (the most ancient of all railways) was taken over in 1863. The chief lines extend from Doncaster and York to Darlington, Durham, New-castle, and Berwick-on-Tweed, Hull, Scarborough, Carlisle, etc., connecting with the Great Northern Railway between Doneaster and York and with the North British at Berwick, forming part of the East Coast route to Scotland. The total mileage of the company is (1913) 1680 m.; it also owns extensive docks at Hull, Middlesbrough, S. Shields, Hartlepool, Blyth, etc. The company has twenty directors, and an authorised capital, including loans, of £89,495,848. Of this £6,619,138 represents nominal addition by the consolidations effected in 1895 and 1896. It was on the N.E.R. Company's engines that J. Holden made his experiments with liquid fuel, which proved its commercial utility.

North East Passage, the route, fin-ally found by A. E. Nordenskjöld in 1878-79, from Europe and the Atlantic through the Arctio Ocean round the N. coast of Asia to the Pacific

Ocean.

Northeim, a tn. in the prov. of Han-over, Prussia, 12 m. N.E. of Göttin-gen. It is engaged chiefly in hrewing, tanning, spinning, milling, and in manufacturing sugar, tohacco, and cigars. Pop. 8625. Northern Circars, see CIRCARS, THE

NORTHERN.

Northern Lights, see LIGHTS, NORTH-ERN.

Northern Mythology, see MYTHO-LOGY.

Northern Nigeria, see NIGERIA Northern of France Railway Comnotined of France Rainway Company (Chemin de Fer du Nord) was incorporated in 1845. The house of Rothschild was largely interested in it, and the English directors at the present time are Lord Rothschild and Ratha Arthur de Rothschild and Ratha Ratha Identification. Baron Arthur de Rothschild, The principal lines run from Paris (Rue de Dunkerque terminus) to Calais, Boulogne, Rouen, Amiens, and to the

Northern of Spain Railway Company (Caminos de Hierro del Norte) was incorporated in 1858, with head-quarters at Madrid. The lines run thence to Irun on the French frontier. to Corunna and Gijon; whilst other lines run from Venta de Baños to Santander, from Bilhao to Lerida, Tarra-gona, and Barcelona. The total length of line is 2349 m., including about 42 iu course of construction. The Paris office of the company is at 69 Rue de la Victoire, Paris.

Northern Province, see NILE PRO-

VINCE.

Northern Territory, formerly Alexandra Land, is the name now given andra Land, is the name now given to the N. portion of S. Australia, N. of 26° S. and extending between 129° and 138° E., with a length of 900 m. and a breadth of 560 m. Theregion formerly belonged to New South Wales, but was annoxed to S. Australia in 1863, and transferred to the Commonwealth in January 1911. Much of the country is desert, but near the coasts sugar-cane, cotton, and fruits are grown; mangrove trees are also found near the coast, and plnc, fig, and orange trees in other parts. The chief stream is the Roper R. The climate is tropical R. The climate is tropical, the wet season lasting from November to the annual rainfall is about Gold (over 7000 oz. in 1910). April: copper, wolfram, and tin are the chief minerals. Horses, cattle, sheep, and pigs are reared; pearl fishing is car-ried on near Melville Is. The prinexports are wolfram, copper, hides and cattle, wool, pearl and tortoise shell. Palmerston is the capital, Port Darwin heing an important town. Area 523,620 sq. m. Pop. 3000 (including Chinese, hut exclusive of the diminishing ahorigines

In the interior, estimated at 2000). Northers, cold dry winds which are prevalent during the winter months, and which blow usually over the Gulf of Mexico and the surrounding rcgions. They sometimes produce a sudden fall of temperature, and are often responsible for shipwrecks.

North Family. Among the prominent members of this distinguished family are: Edward North, first Baron North (1496-1564), Chancellor of the Court of Augmentation, who was raised to the peerage in 1554. Sir Thomas North (1535-1601), a man of letters, chiefly distinguished for his translations of Marcus Aurellus and Pln-

Belgian fronticr (viû Valenciennes and Lille). The length of line owned largely drawn npon by Shakespeare, by the company is 2333 m.; the state guarantees a dividend of 54-1 francs of 1637-1685), a lawyer, Solicitor-ger share per annum until 1914. The London correspondent of the company is A. Sine, Charing Cross Station, London, W.C.

Northern of Spain Railway Company is A. Sine de Hiero del Norte) for the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the author of the Customs, 1683, the customs and Lille). Dudley North (1641-91), Commissioner for the Customs, 1683, the author of Currency, and an early exponent of free trade. John North (1645-83), professor of Greek at Cambridge, 1672; prebendary of Westminster, 1673; master of Trinity College from 1673, until his death. Roger North (1663-1721). 1734), a lawyer, the author of Lives of the Norths (Lord-Keeper North, Sir Dudley North, and Francis North), 1742-44. collected and edited by

Henry Roscoe in 1826.

Northfield, a tn. in Franklin co.,
Massachusetts, U.S.A., 42 m. N.E. of
Springfield. It is the hirthplace of
Dwight L. Moody; possesses a sominary and a training school, and is the rendezvous of the annual summer conference of Christian workers. Pop. (1910) 1642.

Northfleet, a tn. in the co. of Kent, England, 1; m. W. of Gravesend. It is engaged in shiphuilding, and in the manuf. of chemicals, cement, and bricks. Pop. (1911) 14,184. North Foreland, see FORELAND,

NORTH AND SOUTH.

North Foreland, Battles off the, were two battles of the first and second Dutch wars respectively, so called because they were fought near the N. F. The first battle commenced on June 2, 1653, between fleets commanded by M. H. Tromp and De Ruyter on the Dutch side, and Monck, Deano, Penn, and Lawson on the English. During the first day's fighting Deane was killed, hnt Blake came to the reinforcement of the English at night with eighteen fresh ships, and on the next day the Dutch were obliged to retire. had eleven ships captured and seven or eight sunk in the action. second hattle was one o of hardest fought and most disastrous battles of the second Dutch War. Tho English fleet, under the command of Monck, engaged the Dutch fleet, commanded by Do Ruyter, in the Downs, on June 1, 1666. The fighting wont against the British, who eventually had to retire with a loss of twenty-one vessels against the Dutch loss of soven ships only, although the victors were not in much better plight than the vanquished.

North German Gazette (Ger. Norddeutsche Allgemeine Zeitung, literally N. German universal or general newspaper). This dally paper, which, during the days of Bismarck, was the mere megaphone of the Iron Chanceller's

utterances, was established in Berlin the world. Trawl fishing is exten-in the middle of the last century, and sively carried on in the shallow parts was for long known throughout Europe as a semi-official journal. Apparently its only claim to be recognised as officially inspired at the present day rests on the fact that its intelligence is derived from Wolff's Telegraph Agency. As a medium of communiqués against France, practically dictated to the editor by Prince Bismarok, the N. G. G. not only focussod the attention of Europe on its columns, but definitely established itself as the authoritative organ of the German government, a position which it only forfeited when the Chancellor ventured to attack the policy of the Emperor William I. In its origin it was an independent journal of markedly Socialistic tone.

North Ham, a vil. of Canada in Wolfe co., Quebec. Pop. 1400. North Holland, see HOLLAND,

NORTH.

North Kanara, see KANARA. Northmen, see NORSEMEN.

Northmen, see NORSEMEN.

North Park, one of the four 'parks' of Colorado,' U.S.A., in Larimer co. Its area is 2000 sq. m., and it stands at a mean clevation of from 8000 to 9000 ft. It is noted for its big game. North Plainfield, a bor. of New Jersey, U.S.A., in Somerset co., 12 m. S.W. of Jersey City. Pop. (1910) 6117. North Pole, see Arctic Exploration.

TION. North Sea, or German Ocean, a European sca, bounded on the E. by the continent of Europe, on the W. by Great Britain; on the S. it is connected by the Strait of Dover with the English Channel and the Atlantic; and on the N. it extends to the Shetland Isles, joining the Norwegian Sea in the N.E. Tho N. S. is somewhat shallow, the Continent and Britain once being coterminous. Its mean depth is about 50 fathoms. The Dogger Bank stretches across the Dogger Bank stretches across the N. S. from E. to W. The coasts of the N. S. are mainly flat; the English coast consists of sandy cliffs and beaches, and the continental coast consists of marshes and protecting banks. The N. S. waters are composed of a mixture of Baltic water through the Strager Back Atlantic water the Skager Rack, Atlantic water through the Shetland-Faroe Channel, and Arctic water through the Norwegiau Sea, and consequently there is great variety of temperature and salinity in various parts of the sea. The union of the northern tidal wave and that from the Strait of Dover sends high tides to London—a fact which is invaluable for shipping purposes. The Atlantic tides, which have

sively carried on in the shallow parts of the sea, and yields vast supplies of haddock, cod, whiting, halibut, soles, brill, turbot, plaice, etc. Line fishing is practised in the deep waters. The courses of the herring shoals round Britain are remarkable. In Shetland, herring fishing commences in June, and later at various stages southward down the British coast till it ends in the late autumn and winter fishing off Norfolk. The maximum length is 600 m., and its greatest breadth is 400 m.; its area is 162,000 sq. m. North Sea Baltic Canal, see KAISER

WILHELM CANAL.

North Sea Fisheries Convention. In 1882 Great Britain, Germany, Denmark, Belgium, France, and Holland signed a convention regulating the police of the North Sea fisheries to waters 3 m. from the coast. The fisher-men of each of these countries have the sole right of fishing within these limits.

North Shields, see SHIELDS, NORTH. North Sydney: 1. A residential suburb of Sydney, New South Wales, Australia. It is situated on the N. shore of Port Jackson, and it possesses one of the largest suspension bridges in the world. Pop. 22,000. 2. A scaport of Canada, on Cape Breton I., Nova Scotia, 8 m. N.W. of Sydney. It possesses 3000 ft. of quayage, and a depth alongside of from 15 to 28 ft. of water. Pop. 7000.

North Tarrytown, a vil. of West-chester co., New York, U.S.A., 26 m. N. of the city of New York, on the Hudson R. Near here is Sleepy Hol-low of Washington Irving's Legend of Sleepy Hollow, and it is also the burial-place of Trying. It possesses an old place of Irving. It possesses an old Dutch church, dating from 1699. Dutch church, o Pop. (1910) 5421.

North Tonawanda, a city in Nia-gara co., New York, U.S.A., on the Niagara R., 10 m. N. of Buffalo. Its greatest amount of trade is carried on in lumber, but it also manufs. iron, nuts and bolts, boilers and engines, and merry-go-rounds. Pop. (1910) Pop. (1910) 11,955.

Northumberland, tho most northerly co. of England. The coast-line is flat and sandy, the cliffs are low, and there are few inlets. There are several islands, the most important being Holy Is., or Lindisfarne, and the Farne Is. The surface from the low plains in the E. rises to a moorland region in the centre, and so upward to the Cheviot Range, reaching its greatest eleva-tion in Cheviot Peak (2676 ft.). The chief rivers are the Tweed, Aln, Coquet, Wansbeek, Blyth, and Tyne; a salinity of 35 pro mille, send out the Tweed being famous for its salmon considerable heat. The fisheries of fishing, and the Coquet for its trout. the N. S. are the most productive in In the S. lies the big coal-field; lead

and zino are found, and building-stone | Scotia and New Brunswick. is quarried. The soil varies very much, and a large proportion is permanent pasturage. Oats and harley are the principal crops. Sheep rearing is carried on very extensively, there heing a particular breed known as the Cheviots; cattle arc also reared. The Tyne forms the great manufacturing centre, the industrics including shipbuilding, iron-works, blast furnaces, rope-works, potteries, brickfields, and glass factories. Machinery and tools are also manufactured. North Shields is the centre of the sea-fisheries, and Hexham has a large glove factory. The Tyne has the largest coal-shipping trade in the world, Newcastle being the principal port. Other ports besides those on the Tyne are Blyth, Ambel, Alnmouth, and Berwick. The county is divided into four parliamentary divisions, each returning one member. The county originally formed part of the Saxon kingdom of Bernicia, which hecame merged into the kingdom of Northumbria (q.v.) about the end of the 6th century. It suffered considerably from the horder raids, but there are some fine old raids, but there are some nne old huildings, notably Lindisfarne Priory (1993), Hexham Abbey Church, built over the crypt of Wilfred's Abbey of St. Andrew, and the castles of Alnvick, Dilston, ctc. The county also includes such famous hattlefields as Otterhurn and Flodden Field, and is the heave of the great Perey family. the home of the great Percy family. Area 2018 sq. m. Pop. (1911) 697,014. See Victoria County History, Northumberland.

Northumberland, Dukes and Earls. The first duke was John Dudley, who played an active part as a politician and soldier during the reign of Edward VI., and succeeded in overthrowing the Protector Somerset. He plotted the exclusion of Mary Tudor and the accession of Lady Jane Grey, who had married his son, Guddford Dudloy. The plotfailed, however, and Northumberland was executed, as were later his son and daughter-inlaw. The title of the Earl of N. lay with the Percy family (first earl d. 1408). This family acted as the war-1408). This family acted as the warden of the marches on the borders of Scotland. They supported Henry of Lancaster in his bid for the throno in 1399; and later, considering his treatment of them after Homildon Hill, 1402, ungrateful, broko into rebellion. Henry Percy (Hotspur) allied with Owain Glyndwr, and was defeated outside Shrewsbury (1403) whilst attempting to join his ally. The family same of the present ducal family is namo of the present ducal family is Smithson, and the creation is comparatively new (1786).

130 m., hreadth 8 to 30 m. Northumbria, one of the greatest of the Anglo-Saxon kingdoms, situated hetween the Humber and the Forth, originally consisted of two in pendent kingdoms — Bernicia Deira. Of the former kingdom Ida was the first ruler (547-559), and he was succeeded by his four sons, who ruled in succession. The first ruler of Deira was Ella, who flourished about 580, and was succeeded by Æthel-frith, who united the two kingdoms in 605. Edwin, son of Ella, defcated and slew Æthelfrith, and succeeded to the throne of N. He extended the frontiers of his kingdom to the coast (including Anglesey and Man), and during his reign the kingdom was the most powerful ln England. After his death the kingdom was disintegrated. and did not recover its former nower till Oswio became king of Bernicia and annexed Deira. Oswio won a victory over Penda of Mercia, and incorporated the northern part of Mercia re-Mercia in his kingdom. covered her territory in 658, and N. pushed her frontiers northward, annexing Stratbelyde and Dalriada. Iu 685 the Piets recovered their Independence. Alfrith, the son and successor of Oswio, made no further attompts to extend the houndaries of his kingdom, but under his patronage learning flourished in the kingdom. The successors of Osvio were for the most part worthless and incompetent rulers, and henceforth the decline of the kingdom is rapid. In 768 Alchred, King of N., sent an emhassy to Charle-magne. In 827 Eanred, King of N., formally acknowledged the supremacy of Ecgbert I., King of Wessex. Ecgbert II. reigned till 578, and was the last English king of N. Suhscquently N. acknowledged the overlordship of N. was for a Alfred the Great. Alfred the Great. N. was for a considerable period the chief scat in England of literary and missionary activity. It was in the monasteries of Whitby, Lindisfarne, and Jarrow that Bede (672-735) wrote his Ecclesiastical History, and it was N. that scut the missionaries in the 8th century who converted the greater part of Germany. It was not till the reign of William the Conqueror that N. really became an interral nart of England. became an integral part of England.
North Walsbam, see Walsham, NORTH.

North-Western Provinces, see United Provinces.

North-West Frontier Province forms the most northerly division of British India, lying between lat. 31° 4' and 36° 1' N., and long. 63° 16' and 74° 1' E. It is composed of the Punjab districts Northumberland Strait, separates of Bannu, Kohat, Peshawar, Dera Prince Edward Island from Nova Islandi, the Hazara district, and the

of Afghanistan inhabited by inde-published in 1833; also two works on pendent tribes. The principal crops The Genuineness of the Gospels, 1837are maizo and hajra in the cold 44 and 1855. He also translated the weather, and wheat, barley, and grain Gospels, which appeared in 1855, of various kinds in the spring; rice edited by his son Charles Eliot Norton resnawar, and Bannu, and cotton and tobacco in Peshawar. The Sarah (1808-77), an English poet and climate presents a great variety of conditions; there are two seasons of granddaughter of Richard Brinsley rainfall, the monsoon and the winter rains, both somewhat was the and sugar canes are grown in Hazara, and Dr. Ezra Abbot. rains, both somewhat uncertain. The principal industry is agriculture. The principal industry is agriculture. The province is irrigated by various canals owned either by private individuals, district boards, or the government; railways run from Rawalpindi to Peshawar and Jamrud, to Kusalgarh and on to Thel, and from Novshera to Dargai. The chief towns are Peshawar and Dera Ismail Khan. The prevailing language is Pushtu, and most of the inhabitants are Pathans. Area 33,665 sq. m. (16,466 British territory, the rest occupied by independent trihes under control of the agent to the governor-general). Pop. 2,196,933 (mostly frontier tribesmen).

Northwich, a tn. of Cheshire, England, on the R. Weaver, 18 m. E.N.E. of Chester. Among the few ancient relies in the town is the picturesque church of St. Helen, which belongs to the 16th century. The modern town the 16th century. is well huilt, and has some fine churches and public bulldings. The chief industry is the manuf. of chemicals, the works heing the most extensive in the world. There are also numerous ship-yards, brick-yards, and iron foundries. The town has been subject to numerous land subsidences caused by the pumping of the brine used for the manuf. of salt and alkali.

Pop. (1911) 18,151.
North Woolwich, a tn. of Essex, England, on the N. bank of the R. Thames. The Victoria and Albert Docks are here, and there are manufs. of electric telegraph submarine cahles,

of electric telegraph submarine cahles, creosote, etc. Pop. (1911) 3001.
North Yakima, a city of Washington, U.S.A., in Yakima co., on the Yakima R. Pop. (1910) 14,082.
Norton: 1. A par. and vil. of Derbyshire, England, 8 m. N.W. of Chesterfield. Pop. (1911) 3919. 2. A par. and vil. of Durham, 14 m. N. of Stockton on Tees. Pop. (1911) 4000. 3. A par. and tn. of E. Riding, Yorkshire, on the Derwent, 174 m. N.E. of York. It is noted for the training of race horses. Pop. (1911) 3991.
Norton, Andrews (1786-1853), an

Norton, Andrews (1786-1853), an American theologian, born at Hing-ham, Massachusetts, U.S.A. In 1813 versity and lecturer on scriptural England, 6 m. N. of Walsall. Pop. criticism and interpretation. Among (1911) 5200. his chief works are Reasons for not

mountainous region near the border | believing the Doctrines of Trinitarians.

Lost and Saved, 1863.

Norton, Charles Bowyer Adderley, first Baron (1814-1905), born at Knighton, Leicestershire; entered cntered parliament in 1841 as Conservative member for Staffordshire. He held the office of Under-Secretary for the Colonies (1866-68) and president of the Board of Trade (1874-78). In 1873 he was created a baron. He published works on social and economic problems, e.g. colonial policy, prison discipline, and Socialism.

Norton, Charles Eliot (1827-1908). an American man of letters, horn at Cambridge, Massachusetts. U.S.A. He occupied the chair of history of art in Harvard University from 1874-98. He was joint editor of the 98. He was joint editor of the North American Review with James Russell Lowell (1881-68). His chief works are: Considerations of Some Recent Social Theories, 1853; Notes of Travel and Study in Italy, 1860; Historical Studies of Church Building in the Widdle American Studies of Church Building in the Widdle American Studies of Church Building in the Middle Ages, 1876. But he will be chiefly remembered for his translations and studies of Dante's Vita Nuova and Divina Commedia, 1891. See Life, edited by S. Norton and M. A. do Wolfe Howe, 1913. Norton, Fletcher, first Baron

Grantley (1716-89), born at Grantley, near Ripon. He entered parliament as member for Appleby in 1756, be-came Solicitor-General in 1762, Atcame Solicitor-General in 1702, Au-torney-General in 1763, and Speaker of the House of Commons in 1770. He was raised to the pecrage in 1782. Norton, Thomas (1532-84), an Eng-lish dramatist and lawyer, born in

London. He entered parliament in 1558, and was appointed to the office of Remembrancer of the City of London in 1571. He collaborated with Sackyille in the composition of the first English tragedy, *The Tragedie of Gorboduc* (1561), written in blank verse.

Norton Canes, or Norton-under-Can-

Norton-in-the-Moors, a par, and vil.

of Staffordshire, England, 2 m. N.E. range, although generally too high of Burslem, with coal mines and iron for cultivation, contain the best works. Pop. (1911) 4600.

Norton Sound, a large inlet of the Behring Sea, situated between lat. 63° and 65° N. and long. 162° and 166° 30′ W., in Alaska ter. It penotrates inland nearly 200 m., receiving the waters of Vulca B. the waters of Yukon R.

Nort-sur-Erdre, or Nort, a tn. of France, in the dept. of Loire-Inférieure, on the R. Erdre, 16 m. N.E. of Nantes.

Pop. 5400.

Norwalk: 1. A health resort of Connecticut, U.S.A., in Fairfield co., at the mouth of the R. Norwalk, on Long Island Sound, 12 m. W.S.W. of Bridgeport. The harbour is excellent. The oyster fisheries are extensive, and other industries include ship-yards, iron works and foundries, carriage factories, straw hat factories, and nanufs. of locks, bolts, serews, etc.
Pop. (1910) 6954. 2. Cap. of Huron
eo., Ohio, 51 m. W.S.W. of Cleveland,
with manufs. of sewing-machines,
ploughs, etc. Pop. (1910) 7858.
Norway (Norwegian Norge), the

western portion of the Scandinavian peninsula, which, together peninsula, which, together with Sweden, formed one joint kingdom down to 1905, is now a separate kingdom. It is situated between 57° 58′ and 71° 10′ N. lat., and between 5° and 28° E. long. It is bounded on the E. by Sweden and Russla, and on every other side is surrounded by water, having the Skager Rack to the S., the German Ocean to the W., and the Arctic Sea to the N. Its length is about 1100 m. and its greatest width about 1100 m., and its greatest width about 250 m.; but between the lats. of 67° and 68° it measures little more than 25 m. in breadth. The area is 124,129 sq. m., and its pop. is 2,391,782. The whole of the Scandisticture of the second states of the second states of the second sec navian peninsula consists of a conuected mountain mass, which, in the southern and western parts of N., constitutes one continuous tract of rocky highlands, with steep declivi-ties dipping into the sea, and only here and there broken by narrow tracts of arable land. Of the numer-ous summits which lie along tho watershed, and which riso above the liue of perpetual snow, the highest, known as the Sulitelma, has an elevation of 6200 ft. The highest peaks lie around the Sogne Fjord, and reach an elevation of over 8000 ft.
The mean level of the range, which seldom rises more than 4000 ft. above the sea, is occupied by extensive snow-fields, from which glaciers snow-fields, from which glaciers descend to the edge of the sea, while hero and thero the vast snow plain is

timber that is exported from N., and afford good pasturage in the height of the summer, when the flocks and herds are driven thither from the low lands near the entrance of the fiords. N. abounds in lakes and streams, but none have an area exceeding 400 sq. m. The chief rivers of N. are the Glommen, Lougen, Louven, Drammen, Otter, and Wormen. The first of these has a course of 400 m., but the majority of the Norwegian streams, all of which rise at great elevations, have a comparatively short course, and are unfit for navigashort course, and are unit for navigation, although they are extensively used to float down timher to the fjords, whence the wood is exported in native ships to foreign ports. The greatest number of fjords occur in the northern parts of the land uear Trondjem, where the narrow Sogne Fjord penetrates through the Norska Fiellen to a length of 120 m., while near this the Porsanger Fjord runs a near this the Porsanger Fjord runs a sinuous course of 100 m., with the exceptionally large width of 20 m. The peculiar physical character of N. necessarily gives rise to great varieties of climate in different parts of the country. The lufluence of the sea and of the Gulf Stream, and the pouctration of deep inlets into the interior. greatly modify the severity of the climate on the western shores, and render it far superior to that of the other Scandinavian countries in the samo latitude. On the ceast generally rain and fogs prevail; while in the regions near the North Cape storms are almost incessant, and rago with extraordinary violence. In the unextraordinary violence. In the in-terior the air is clear and dry. The longest day, which in the S. is 18 hours, may be said to be nearly three months in the high latitudes of the northern districts, where the longest night lasts almost an equal length of time. The protracted winter of the northern regions follows suddenly on the disappearance of the sun, when the absence of solar light is compensated for by the frequent appearance of the aurora borcalis, which shines with sufficient intensity to allow of the prosecution of ordinary occupations. The Scotch fir, Pinus sylvestris (Norwegian Furn), and spruce, P. abics (Norwegian Gran), cover extensive tracts, and with birely constitute the principal wealth of N.; the value of these articles of expert amounting in some years to upwards The hardier of 10,000,000 thalers. fruits, as strawberrles, goosoberries, broken by fjords (i.e. friths), some of cherries, and raspberries, are abund-whileh, as the Folden Fjord, penetrato ant and excellent of their kind. upwards of 70 m. through the rocky Hemp, tlax, rye, eats, and barloy are masses. The upper valloys of this grown as far N. as 66°. Agriculture is

most successfully prosecuted in the strong, well-knit, muscular frames, of amts or administrative districts of Jarlsberg and Laurvik, Akershuus, Budskerud, and in the S. generally: power of the realm is vested in the while in the northern parts, in the upper valleys, the rearing of cattle constitutes an important branch of 'Odelsting,' The executive is represented by the king assisted by the king assisted by the king assisted by the king assisted by the consecutions and canable of heaving multi-seven councillors. horses are small, they are generally strong and capable of bearing much hard labour. The fisheries of N. are of very great importance, both for home consumption and for export. Fish are caught in almost every stream and lake of the interior, as well as in the fjords of the coast, and in the bays and channels which encircle the numerous islands skirting the long sea-line of N. Salmon, herring, and cod are of the greatest importance. The fauna of N. includes the bear, wolf, lynx, elk, otter, reindeer, red-deer, seal, the cider-duck, and many other kinds of sea-fowl, blackcock, capercailzic, and a great variety of small game. The mineral products comprise silver, copper, cobalt, iron, ohrome ironstone, etc. The richest mines are situated in the S., and chiefly in the district of the Glommen, as the celebrated and Glommen, as the celebrated ancient silver works of Kongensberg, ancient silver works of Rorass and Kaafjord, and the numerous iron shafts on the southern declivities of the mountains between Kongensberg and the Glommen. Shipbuilding in all its branches is almost the only industrial art that is extenonly industrial art that is extensively and actively prosecuted. The total annual value of exports is about £15,000,000, and imports £22,000,000. The Lutheran is the predominant, and almost the exclusive, church, although freedom is allowed to all other Christian denominations. Jews are not tolerated. Education is compulsory from the ages of six and a half years to fourteen. The University of Christiania (g.v.), which was founded in 1811, is well attended. The army of N. is composed of a national militia, and service is universal and compulsory, but the navy is insignificant. Horten, in Christianiafjord, is the principal naval port. The only fortified places are port. The only for Fredericksteen at Frederickshald, Fredericksted, Akershuus, Bergen-huus, Munholm, and Wardoehuus, near the Russian frontier. The chief towns are Christiania, Bergen, Trondjem, Slavanger, and Drammen.

northern regions,

N. are generally a race, akin to the N

of Aryan descent. The genuine Nor-throne, until, like the sister-kingdom, wegians are of middle height, with it agreed of its own free-will to relin-

seven councillors. History.—The carly history of N. is comprised in that of the other Scandinavian countries, and is, like theirs, for the most part fabulous. It is only towards the close of the 10th century, when Christianity was introduced under the rule of Olaf I., that the mythical obscurity in which the annals of the kingdom had been pro-viously plunged begins to give place to the light of historical truth. The introduction of Christianity, which was the result of the intercourse which the Norwegians had with the more eivilised parts of Europe through their maritime expeditions, destroyed much of their old beathenism. Olaf II., or the Saint (1015-30), who zealously prosecuted the conversion of his countrymen, raised himself to supremo power in the land by the subjection of the small kings or chieftains. The war between Olaf and King Knut the Great of Denmark, which terminated in 1030 with the battle of Sticklestad, in which the former was slain, brought. N. under more eivilised parts of Europe through former was slain, brought N. under the sway of the Danish conqueror; but at his death in 1036 Olar's son, Magnus I., recovered possession of the throne, and thenceforth, till 1319, N. continued to be governed by native The death in that year of Haakon V. without male heirs threw the election of a new king into the hands of the National Assembly, who, after many discussions, made choice of Magnus VIII. of Sweden, the son of Haakon's daughter. He was in turn succeeded by his son Haakon, and his grandson Olaf IV., who having been elected king of Denmark in 1376, became with of the sister Searching view came ruler of the sister Scandinavian kingdoms on the death of his father in 1380. This young king, who exercised only a nominal sway under the guidance of his mother, Queen Margaret, the only child of Valdemar III. of Denmark, died without heirs in 1387. Margaret's love of power and capacity for government brought ahout her election to the triple throne of the Scandinavian lands, and from Race and Government. — With the this period till 1814, N. continued exception of some 20,000 Lapps and united with Denmark: hut while it Finns, living in the most remote shared in the general fortunes of the northern regions , e, it retained its own con-

mode of government, and its right of electing to the

Norwegian

quish this privilege in favour of in 1814 must be the starting-point in hereditary succession to the throne. a hrief outline, giving the names of the (See DENMARK—History.) The Na-poleonic erisis may he said to have severed this union, which had existed for more than 400 years; for Denmark, after having given unequivocal proofs of adhesion to the cause of Bonaparte, was compelled, after the war of 1813, to sign the treaty of Kiel in 1814, in which it was stipulated by the allied powers that she should resign N. to Sweden. Charles XIII. was deelared joint king of Sweden and N. in 1818. From that time down to 1905 N. remained in union with Sweden. In June of that year N. declared the union dissolved, and the repeal of the union was signed in October of the same year. The throne was offered to and declined by a prince of the reigning house of Sweden, hut was afterwards accepted by Prince Carl of Sweden, who was thereupon elected as King Haakon VII. In 1908 a treaty was signed by Great Britain,

in 1906. See Giertsen and Halvarsen, in 1906. See Giertsen and Halvarsen, Norway Illustrated, 1883; Kjerulf, Die Geologie der südlichen und mitt-lern Norwegen, 1880; and Keary, Norway and the Norwegians, 1892. Language.—The old Norse language forms one of the chief hranches of the Scandinavian family of Indo-Euro-con language and is now represented. pean languages, and is now represented by Icelandic, Iceland having heen colonised from N. For official and hterary purposes modern Norwegian is identical with Danish, with a large incorporation of Norso words. There

married Princess

Haakon

by politics, towards an artificial composite language (landsmaal) formed from the various peasant dialects. Literature.-The literature of N. cannot be taken as a wholo; for the old sagas, the poetry, and his-torical legends were written in the Norse, which was the language of the colonists of Iceland from N., and

Norwegians by bi of Denmark from N. ...

Daughter; other poets are Magnus Landstad (d. 1880), a collector of folk-Germany, France, Russia, and Norway guaranteeing the integrity of the Norwegian kingdom. King Jorgen Moe (d. 1882). Assmund Vinje (d. 1870) was a pioneer of vinje (d. 1870) was a pioneer of the movement (maalstraev) to form an artificial Norwegian language, apart from the accepted Dano-Nor-wegian, out of the various peasant dialects, which has had such marked Maud Alexandra, the youngest daughter of King Edward VII. of England. They were crowned at Trondjem Cathedral dialects, which has had such marked effects on Norwegian political and literary history. Of the next period the great names are those of Henrik Ihsen, poet and dramatist, and Björnstjerne Björnson, novelist and dramatist, whose reputation and influence were world-wide. With them must bo joined Jonas Lie (d. 1908) and Alexander Kijelland (d. 1906), hoth great novelists. Of a later generation the names of two powerful and individual writers. Arne Garbor (b. 1852) and writers, Arne Garborg (b. 1852) and Hans Jaeger (b. 1854), must be men-tioned. Quiet humour, rare in Norare many dialectical varieties of Norse wegian literature, is found in the peasant sketches of Hans Aanrud (b. spoken by the peasants, and since the middle of the 19th century there has peasant sketches of Hans Adurud (b. 1863). Of modern poets the names of Niels Vogt (b. 1864) and Nilhelm Krag (b. 1871) stand out, with those of the novelists Knut Hamsun (b. 1859) and Hans Kinek (b. 1865), and of the dramatist Gunnar Heiberg (b. 1857). Latterly the artificial compound diabate Laurager. (b. 1867) has been been been seen as the compound of the contract of the compound of the contract of the cont been a strong movement, complicated Latterly tho artificial compound dia-lect language (landsmaal) has been strongly represented by Kristofer Uppdal (b. 1878) and Oskar Braaten (b. 1881). The novels of Ellert Bjerke (b. 1887), Rolf Schögen (b. 1887), Sig-mun Rein (b. 1873) and the lyrled poems of Herman Wildenvoy (b. 1886) is so bound up with Leclandio literature that it cannot be separated therefrom (see Iceland—Literature and Language). Similarly, till well on into the 19th century, it is in Denmark and in Danish that the sources of Norweglan literat

Norweglan literat

Norweglan literat

The Arctic stretches between Norway and land, and between the Arctie and ahout lat. 61° N. It is

a hrief outline, giving the names of the

more outstanding figures, many of whom are treated in separate articles

whom are treated in separate articles in this work. The poets of May 17, 1814, the inaugural day of Norwegian independence, the 'Trefol,' Conrad Schwach (d. 1860), Mauritz Hansen (d. 1842), and Henrik Bierregaard (d. 1842), did much for the new school; hut the greatest early figures were Henrik Wergeland (1808-45), a wild, uncontrolled genius breathing the spirit of revolt, and his great opponent, Johann Welharen, classicist and conservative (1807-73). Wergeland's sister, Camilla Collet (1813-95), was an early realistic novelist, and her great novel, The Governor's Daughter, is a landmark in the women's suffrage movement. Andreas Munch (1811-44) achieved

Andreas Munch (1811-44) achieved great popularity with his poems and by his epic, The Bridal of the King's

connected with the Arctio in the far trade in dairy produce. north, between Spitzbergen and 7422. Spitzbergen between Greenland by a wido deep opening. An extensive seal and whale fishery is carried on, especially off the N. and E. coasts of Jan Mayen Is. Area 100.000 sq. m. Meau depth 870 fathoms.

Norwich: 1. A city and bor. in the co. of Norfolk, England, situated in the valley of the Wensum about 115 m. N.E. hy N. of London. Fragments of the ancient walls, which were four miles in circuit, remain. The famous Norman castle stands on an eminence and is surrounded by earthworks and a ditch. This castle was built soon after the Conquest, but was destroyed: and it was subsequently rebuilt by Stephen. The cathedral, which is situated in the hollow between the castle and the river, was founded in 1096. In the 13th century a considerable portion of the building was destroyed by fire, and was rehuilt thereafter. The architecture of the cathedral as it now stands is composite. The two chapeis at the east end are the original Norman. The Perpendicular spire, which replaced two earlier wooden spires, belongs to the 15th century. magnificent cloisters were completed in 1430, and the vaulted stone roof of the nave in 1472. The carved work of tho oak stalls and misereres dates from the 15th century. There are many churches in the city; the largest, St. Peter Maneroft, dating from the 15th century, is one of the first parlsh churches in England. St. Andrew's Hall, a fine Gothic edifice, was originally the nave of the Blackfriars mon-

and dates from 1408. The Grammar School of N. belongs to the early 14th century; it was formerly a chapel of St. John, and has a fine crypt. The principal industries are iron foundries, agricultural implement works, chemical works, tanneries, hoot manufactories, and manufactories of woollen goods. The manufacture of mustard, starch, and cornflour is also a flourishing industry. Pop. (1911) 121,493.
2. A city of Connecticut, U.S.A., on the R. Tbames, 40 m. S.E. of Hartford. It is a flourishing industrial centre, manufs. cotton goods, guns, and printing and hinding machines. important manufs. of engines, indusgoods.

Pop. (1910)

Norwood, a suhurhan dist. of S. London, a mile S.W. of Dulwich. It consists of Upper, Lower, and South N., and is partly in the county of London and partly in Surrey. Pop. (1911) 36,000. 2. A tn. of Adelaido. o., S. Australia, forming a suburh 3 m. N.E. of Adelaide. There are market gardens, and brewing is carried on. Pop. 13,000. 3. A. tn. of Ohio, U.S.A., in Hamilton co., forming a S.W. suhurh of Cincinnatti. Pop. (1910) 16,185. 4. A tn. of Massachusetts, U.S.A., in Norfolk co., 14 m. S.S.W. of Boston. Pop. (1910) 8014. Norwood, Richard (1590-1675), an English mathematician. In 1616 he was sent to the Bernudas to survey was sent to the Bernudas to survey the newly settled islands, and was accused of having reserved for himself some of the best land there; he certainly resided there during the Civil War, carrying on his profession Civil War, carrying on his profession of teacher of mathematics. He published a map of Bermudas in 1622; The Doctrine of Triangles, 1631; The Seaman's Practice, 1637; and The Epitomy or Application of the Doctrine of Triangles, 1667.

Nosari, Nausari, or Navasori, a the of Rowbey India on that h of the

of Bombay, India, on tho l. b. of the Purna R. (which is navigable up to here), and 19 m. S.E. of Surat. It has

a colony of Parsee cotton weavers. Pop. 16,000. Nose, the organ of smell. It consists of an external portion and an internal part divided into two nasal cavities. The outer N. has the shape of a triangular pyramid. The bony structure of the N. consists of the short nasal hone which is connected with the forehead by a hridge. Be-sides this hone, the N. is supported hy cartilages, of which the five chief are the cartilage of the septum and the upper and lower lateral cartilages. The cartilage of the septum forms the supporting part of the vertical partition which separates the right and left nasal cavities. The lower part of the septum is not formed by the cartilage of the septum, hut is freely movahle, and is on this account called the septum mobile nasi. The upper lateral cartilage is triangular in shape, and serves as a continuation of the nasal bone. It is joined at its lower edge on each side by fibrous tissue to the lower lateral cartilage. This consists were bought of Uncas, an Indian chief, for the equivalent of £70. Pop. (1910) 20,369. 3. Cap. of Chenango co., Now York, U.S.A., on the Chenango R., 50 m. S.E. of Syracuse; has ternally and internally. The orifices or nostrils are guarded by small hairs, trial machines, carriages, and leather or vihrisse, which servo to protect There is also considerable the nasal cavities from dust, small

insects, etc. Above the aperture in each nostril is a slightly expanded cavity, the vestibule, which is pro-longed towards the tip as a pouch, or ventricle. Above the vestibule the nasal passage, or fossa, is divided into two parts, the upper or olfactory, and the lower or respiratory, portion. The the lower or respiratory, portion. The fossæ are divided into three passages, or meatuses by three turbinated, or seroll-like hones. The meatuses communicate with the ethmoidal, sphenoidal, and frontal cells.

The olfactory region is lined with ucous membrane, yellowish in dour, and containing olfactory glands, or glands of Bowman, embedded in it. In the respiratory region the mucous membrane is covered by columnar, ciliated epithelium, and contains many cells secreting a watery fluid. The N. is supplied by hranches of the facial nerve, the ophthalmic, and others for the conveyance of motor impulses and of ordinary taetile sensations. The sense of smell is conveyed by olfactory nerves arising from the olfactory bulb and distrihuted over the mucous membrane of the olfactory region. Here they are connected with rod-like cells; these cells pass between the columnar epithelium to the surface, where a delicato filament serves as a free end; at the other end of each cell the filament becomes continuous with an olfactory nerve flament. It is not definitely known whether the external stimulus which gives rise to the sensation of smell is physical or chemi-cal in its nature. The substance excit-ing the smell must be in a finely divided state, and is usually a vapour or gas. The free ends of the olfactory or gas. Ane rece ends of the olfactory filaments are usually covered with a thin layer of fluid. If the fluid is too thick, as in catarrh, or if it is replaced by a dry crust, the efficiency of the olfactory organ is diminished or temporarily destroyed. The available of the organism of the olfactory organism of the olfactory organism of the organis porarily destroyed. The exciting substance hecomes dissolved in watery fluid, and so affects the cell filaments. In order that solution may be effected readily, a certain amount of pressure is necessary; that is, tho air containing the substance must be driven with some force against the membrane by sniffing. The organ of smell is probably not so delicately differentiated in man as insome of the lower animals. The sense is quickly fatigued, so that a delicate odour is sometimes not perceived after the initial experience; most persons also find it difficult to discriminate in a mixture of smells, and probably only the predominating odours in a lost of smells are perceptible to man, al-though the lower animals might be

Above the aperture in fractured by direct violence, and if is a slightly expanded adequate treatment is not resorted to, a displacement of the septum may result, leading to nasal obstruction and possible complications. rosacea is a skin affection characterised hy congestion of the capillaries of the outer N. and later hy hypertrophy of the sebaceous follicles. The N. has then a swollen appearance, and the course of the dilated capillaries can he plainly seen. It occurs in dyspeptics, alcohol- and tea-drinkers, and is known as 'brandy nose' or 'whisky nose,' though the cause may not be the use of alcohol. Sulphur ointment is useful as a local application, but the condition is only cured hy the removal of the predisposing cause. Rhinitis is a very common complaint. It involves inflammation of the mucous membrane of the N.; its acute form is coryza or cold in the head. Chronic rhinitis is due to repeated attacks of the acute form, and produces in the early stages hyper-trophy of the mucous membrane, and in the later stages atrophy of tho mucous membrane, together with the formation of dry crusts, or scabs. Fibrinous rhinitis is a rare form, in which a false membrane is developed in the N. Epistaxis is bleeding from the N. The cause may be a high arterial pressure due to one of a variety of conditions, and in many cases is itself a remedial effort of the organism. Where the bleeding continues, the patient should rest quietly on the back, and tanno gallio acid should be applied locally. If the hemorrhage resists these measures, the N. must be plugged. Polypi, or tumours, may be formed on the mucous membrane. A soft mucous polypus can easily be removed and does not usually recur, but fibrous polypi have a tendency towards malignancy.

malignancy.

Nosology (Gk. νόσος, disease; λόγος scienco), that branch of medicine which treats of the distribution and arrangement of diseases into classes, orders, etc. The most popular system is that of Dr. Farr, which has taken the place of Cullen's; also of the collection of avidence as to whether lection of evidence as to whether a particular condition should be regarded as a special disease.

Nossi-Bé, an island 8 m. from the N.W. coast of Madagascar, belonging to Frauce. It is 14 m. long by 10 m. broad with an area of 130 sq. m. It is volcanic and mountainous. Rice, maize, manioc, bananas, coffee, and sugar are grown. Cap. Hellville. Pop. 10,000.

Nostalgia (Gk. vooros, return home; though the lower animals might be able to discern many.

Diseases, elc.—The N. may he cholia, but is prohably a psychle manifestation merely. tensity from a sentimental inclination to think fondly of the home-land, to an uncontrollable desire to return and a settled disliko of one's present surroundings. The onset may be gradual or may be precipitated by any critical or disturbing occurrence. It is very common among people who have previously dwelt in agricultural and pastoral districts where the inhabitants are inclined to be elannish and intolerant of innovations. The cause of the condition is undoubtedly the realisation of the change of circumstances, and the absence of familiar people and impressions. That there is no organic lesion in this form of melancholia is attested by the fact that the condition immediately dis-

Nostoc, a genus of lowly plants, some of them common on damp ground and moss, and floating or attached to substances in fresh water. As seen, they are minute lumps of green or bluo jelly, which the microscope shows to be occupied by rows of cells, some round, some large and square, arranged in the form of a chain. N. propagates itself either by spores or by cell division, the larger cells breaking away from the lump aud secreting a new gelatinous covering in which a fresh colony is

appears when the desire to return has

been accomplished.

Nostradamus, or Michel de Notredame (1503.66), a French astrologer, of Jewish extraction, born at St. Remy, Provence. For many years he practised as a physician, and gained high reputation for his skill in stemming the tide of the great plagues of Lyons. His Centuries was published in 1555, and aroused universal interest and excitement. Lives of the astrologer have been written by Jauhert (Vie de M. Nostradamus) and Bareste (Nostradamus).

Nota, Alberto (1775-1847), an Italian comedy writer, born at Turin. He was greatly influenced by Molière, but he followed his model too closely to give his own individuality scope His best work and freedom. perhaps La Lusinghiera. Collected editions of his plays were published at Florence in 1827 and at Turin in 1837 and 1842.

Notables, The, advisory assemblies of notable personages summoned by the kings of France in times of stress. These assemblies had no constitutional authority whatever, and their

It varies in in-give their consent to, a more equitable nental inclination system of tax collecting. Louis XVI. shome land, to an again summoned the N. in 1788. Richelieu consulted this body in pre-

ference to the states-general Notary Public, Tho office of N. P. is of great antiquity, and its origin is to be traced to the professional writers or scribes who made drafts of public and private instruments. According to Brooke (Treatise on Notaries, 1901). the name was applied amongst the Jews to the royal secretaries who wrote the letters and edicts of the king, kept the register of his troops, and attended to his revenue and expenditure; to scribes who copied and interpreted sacred writings, and to notarics who wrote and prepared legal documents. The same authority finds analogous officials in ancient Syraand an another states in another system cuse, Egypt, Greece, and Rome. The term notary itself is derived from Latin, notae, meaning the system of stenography in vogue among the early Roman scribes, though later it appears to have been applied to the clerks or registrars attached to the provincial and municipal magistrates and officials of the emperor's privy council, while those who prepared privato deeds and documents were specifically known as tabelliones from labellio, the thin waxed tablets used in drafting. There is no European nation without its Ns. P., though their duties differ considerably in different countries. In England the duties of a N. P. are very circumscribed, and in status he is far below, e.g. tho N. P. of France. The English notary's chief duties are to note and protest bills of exchange, to authenticate copies of private documents and deeds, to draft and attest instruments like powers of attorney about to be sent abroad, and receive affidavits of mariners, and administer oaths. A great many of the functions of a notary are, however, in England performed by solicitors, e.g. the preparation of wills and contracts, and henco it is that this official's duties are so commonly associated with protesting hills of exchange on dishonour. The utility of a 'notorial act ' (i.e. the act of authenticating or certifying a document or entry by a written instrument under the signa-ture and seal of a N. P., or an instrument attestation, or certificate made or signed hy a N. P.), is that it is by the custom of all merchants accepted as unimpeachable evidence of the legal validity of the transaction retransactions were of a purely private and confidential nature. In 1787 calonne proposed to Louis XVI. that the first assembly of the N. should be place. The powers of a N. P. in called in order that the privileged classes might be prepared for, and depositions and do other acts relating

to the recording of testimony, and plants (order Liliaceæ) bearing umtake proofs of debts in hankruptey. hels of white, yellow, lilac, rose, er In England Ns. P., who have always purple flowers. N. fragrans and a few been civil and canon law officials, are other species are hardy; others are appointed by the Archbishop of Canterbury. In America they are appointed by the state-governor, and with the advice of either the council or the senate of the state.

Notation (Lat. notatio, noto, to mark), in music, the art of writing music in notes, i.e. representing musical sounds and their various modifications, by notes, signs, etc. It dates hack to the time of Gregory. tt dates nack to the time of Gregory, 590-604, when a very crude form of notation was used. It consisted of dots and dashes of various shapes, and the 'stave' was then unknown. From 990-1050 it was much improved by Guido of Arezzo, who founded our present system.

Notes, Bank, see Banks and Bank-

ING. Notes and Queries, This compact little store-house of quaint or uuknown or little-known facts, phrases, archaisms, and bibliographies of interest to the literary world, was interest to the interary word, was established in 1849 by the antiquary, William John Thoms, with the object of 'providing,' says his blographer in the Dictionary of National Biography, 'a paper in which literary men could answer one another's questions.' avowed objects are not only to afford medium of intercommunication between literary men and general readers, but to elucidate any abstract point, difficult question, or disputed dogma in history, archæology, or literature; and from the time Thoms by of

its object. A full account of the history of N. and Q. from the peu of Thoms will be found in some of the 1876 and 1877 numbers of the peri-Thoms was himself a great contributor to the paper, some of his most arresting articles being, 'The most arresting articles being, 'The Death Warrant of Charles I., another Historic Doubt,' Lord Chatham and the Princess Olive,' and 'Hannah Lightfoot,' Curiously enough, the issue of July 12, 1913, unable to keep Charles's head out of its columns, contains an article on 'The Forged Spacehes and Prayers of the Registration of the Register. Speeches and Prayers of the Regieides.' It is now owned by the proprictors of the Athenœum, and edited by the editor of that periodical.

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Nethechlæna, a genus of ferns of delicate appearance, the fronds being green on the upper surface and powdery or scaly white underneath.

A number of species are grown in the stovchouse and the greenhouse.

Nothescordum, a genus of bulbous

grown in cool greenhouses.

Netice, Equitable and Judicial: Equitable.—It is a principle of equity (q.v.) that an equitable as distinct from a legal (i.e. common law) interest in property is in no way binding upon the person who obtains the legal interest, unless he ought iu conscience to respect the equitable interest, and to respect the equitable interest, and in general his conscience can only he affected by notice, actual or constructive, of the existence of the equitable interest; a.g. A, the owner of an estate creates an equitable mortgage of it to B., then without and increase A makes disclosing such mortgage. A makes another equitable mortgage of it to C. C is ordinarily postponed to B in the matter of repayment of their loans because later in point of time; hut if, assuming that at the time he took his mortgage he had no notice of the existence of the mortgage to B, he subsequently induces A. to convey to him the legal estate whether by way of mortgage or otherwise, he can ignoro B's mortgage altogether. By constructive notice is meant either knowledge of a fact from which tho existence of an equitable interest ought to have been inferred, or the possibility of discovering its oxistence by the customary method of investi-

gating title.

Judicial.—A court of law is said to take judicial notice of a fact when it accepts it in evidence without proof. All judges take judicial notice of inter alia: (1) All Acts of Parliament, public or private, and all unwritten laws and legal principles acted upon by the courts of Great Britain; (2) all general customs decided by superior court of law of equity to have the force of law; (3) the course of proceeding, and all rules of practice of the Supreme Court; (4) the general course of proceeding and privileges of parliament; (5) the ordinary course of nature, and natural and artificial divisions of time; (6) the ordinary meaning of English words; (7) the existence of every state and sovereign recognised by this country; (8) the signatures of high court judges; and (9) all matters which they are directed by statute to netice. See Taylor On Evidence: Stephen, Digest of Evidence. Note, a tu. of Sleily, in the prov. of Syracuse, and 16 m. S.W. thereof. It was built in 1703, near the site of the

ancient Necethum, which had beeu destroyed by an earthquake in 1693. Pop. 23,000. Netecherd, sec Amphioxus, Biology, Chordata, and Embryology. Neternis, or Mantelli, an extinct

New Zealand bird, the last living dismantled during the Protectorate The bird was allied to the Rails, and had rudimentary wings, but could run at considerable speed. The bill and feet were red, the head, throat. and under parts purplish hlue; the upper surface hrownish green, and the wing feathers blue with green tips.

Nototherium, a genus of extinct marsupials, the remains of which are found in the Post-Tertiary of Aus-It differed from Diprotodon

chiefly in its dentition.

Notre Dame de Grace, a large vil. of Quebec, Canada, 2 m. W. of Montreal.

Pop. 2600.

Notre Dame of Paris (Our Lady of Paris), the most important cathedral of Paris. The present building was begun in 1163, on the site of two early churches, but the S. portal was not finished until 1257, although the cathedral was open for worship hy the end of the century. It is a fine example of the two first periods of Gothic, and possesses the Crown of Thorns and a fragment of the Cross. The Fountain of Notre Dame is situated in the Cross. ated in the square of the Arch-bishopric, which occupies the site of the old paiace, sacked in 1381. It was huilt in 1842-46 by Vigoureux, in the Gothio style.

Nottaway, Nottaway, a river of Quehec, Canada, rises in Lake Sosqumika, an arm of Lake Mattagami, and after a N.N.W. course of about 80 m. flows into James Bay, near Black Bear Point. The Nottaway tribe, one of the N. American tribes of Iroquvian stock, were formerly numerous in the district, but are now nearly extinct.

Nottingham, a city, and parl. bor., and co. tn. of Nottinghamshire, England, at the junction of the Leen with the Trent, 125 m. N.N.W. of London. There is a wide market-place (54 acres). The chief buildings are the churches of St. Mary, St. Peter, St. Nicholas (1676), the Roman Catholic cathedral of St. Barnabas (1842-4), University College (1881) with free library and natural history museum, the Guildhall, and the People's College (1846). The site of Nottingham Castle, on a steep rock to the S. of the town, has been acquired on a lease by the corporation, and buildlease by the corporation, and buildings were creeted as a museum and art gallery. N. is an old and important industrial centre; among the manufactures are bobbin-net, lace, favourite residential district. hosiery, cotton, silk and woollens, yarn, cycles, machinery, tohacco, and leather. There are important fairs and a large cattle-market. It became one of the five Danish boroughs. The original castle of Nottingham,

specimen of which was seen in 1866, and replaced by the present edifice -a castle only in name. town's oldest charter dates from 1155. It has returned threo members to parliament since 1885. Pop. (1911) 259,942.

Nottingham, Charles Howard, Lord

Howard of Effingham, Earl of (1536-

1624), see HOWARD.

Nottingham, Finch Heneage, first

Earl of, sec FINCH, HENEAGE.

Nottinghamshire (Notts), a mid-land co. of England. The surface varies, part of it being a continuation of the Yorkshire plain, rising towards the S.W., where the Robin Hood Hills reach an elevation of over 600 ft. Near to these hills lies Sherwood Forest, famous for its connection Forest, famous for its connection with Robin Hood, and now mostly included in the parks that form what is known as the 'Dukeries,' The principal rivers are the Trent. wash, Soar, and Idle. On the W. border lie the Cresswell Crags, in which are some famous caves, where remains of mammoth, cave lion, etc., have been found. On the S.W. there are extensive coal mines, Notting-ham and Mansfield being the chief centres. Sandstone, limostone, and clay are worked. The principal clay are worked. The principal manufactures are lace and hoslery; there are also silk, worsted, and cotton mills, and at Beeston machinery and motor works, while there are tobacco factories at Nottingham. The greater part of the county is under cultiva-tion. Agriculture and farming flourish, and apples and pears are largely grown. It is divided into four parliamentary divisions, cach returning onc member. In ancient times it formed part of the kingdom of Mercia, and was subjected to many incursions from the Danes. In later times the castle of Nottingham hecame histori-cal. At the time of the dissolution of the monasteries there were forty reli-gious houses in N., but the only im-portant remains are those of Newstead Abbey. There are some fine churches, including Southwell Cathedral of Norman date, and some splendid modern mansions in the 'Dukeries.' Area 827 sq. m. Pop. (1911) ries.' Area 827 sq. m. Pop. (1911) 604,098. See Victoria County His-

Notus (the Greck name for the S. or

S.W. wind), see Auster.

Notylia, a genus of small epiphytal orchids, natives of tropical America, and not often cultivated.

Nouméa or Numea, also called Portbuilt hy the Conqueror, in which de-France, cap of the French colony several parliaments were held, was of New Caledonia, on the Bay of Nouméa on the S.W. coast of the brightness followed by island. It has an excellent harbour, a government house, museum, college, and barracks. Pop. 6968.

Noumenon (from Gk. vociv, to know), in philosophy, a term introduced by Kant and rarely used apart from the consideration of his own philosophy. According to him, noumena are the real objects in them-selves lying behind the phenomena, a phenomenon being defined as the undetermined object of an empirical intuition.' The noumenal world he held at first to be completely unknowable, since we can only recognise phonomena: but later he teaches that introduction to it is given by the practical reason, the capacity which we exercise as moral agents.

Noureddin (one of the Moslem rulers of Syria), see NUR ED-DIN MAHMUD. Nouvelle, or Meguasha, a riv. of Quebec, Canada, flowing S. and S.E. through the co. of Bonaventure into Chaleur Bay. Length, 60 m.

Nouvelle Revue, La, a French political and literary journal, published fortnightly, was founded at Paris in 1879 by Madame Edmond Adam. When the republican government was definitely consolidated in 1870. Madame Adam, resolving to continue the struggle for the Ideas of patriotism and progress, enlisted the services of the most energetic and progressivo of the younger generation of writers. The journal speedily became popular, and in 1900 she banded over its direction to Monsieur P. B. Ghensi.

Nouzon, a tn. in the dept. of Ardennes, France, 7 m. S. E. of Mézières, on the r. b. of the Meuse. It has iron foundries, and manufactures fire-irons and agricultural instruments. Pop. 7500.

Novæ, or New Stars, are which are suddenly perceived in a part of the beavens in which, despite being well-charted, there has hitherto been no such star known. Probably new stars of small brilliancy are of not infrequent occurrence, but of the larger magnitude, such, for instance, as are visible to the naked eye, the number has been few. One such was ob-served by Hipparchus, the father of astronomy. Tycho Brabé observed the brightest recorded nova on Nov. 6, 1572, in the constellation of Cassiopcia, and in October 1604, Kepler and Galileo saw one in Opbiuchus. Tho latter, and one seen in Vulpecula by Anthchm in 1670, were the only N. seen in the 17th century; but eight were found in the 19th,

decline which in the course of a few months leaves it barely visible even with a powerful telescope. Two of the most important N. in recent years have been Nova Aurigæ (1892) and Nova Persei (1901), both of which were discovered with the naked oye by Dr. Anderson at Edinburgb. latter is by far the most interesting yet observed. When covered on the morning of Feb. 22, its magn was ten ti

northern till in 1903 it was of the twelfth mag-nitude. In the autumn of 1901, while attempting to determine its parallax, Prof. Max Wolf found that the star was surrounded by a nebula. This nebula was photographed soveral times, the photographs revealing the fact that the nebula was moving and led to the conclusion that it had been expanding continuously since the appearance of the star. Perrine demonstrated by the spectrum that the nebula shone by the reflected light of the star, a demon-stration which led Prof. Kapteyn to suggest that all space was filled by ao stationary, and attenuated, luminous matter which was only

luminous matter which was only rendered visible by reflection. The origin of N. is quite unknown, but a collision between two dark bodies would naturally suggest itself.

Novaliches, Manuel Pavia y Lacy, first Marquis de (1814-96), a Spanish soldier, born at Granada. Ho was a general at the close of the Carlist War (1810), and was made a senter in (1840), and was made a senator in 1846 and a marquis in 1848. He was minister for war in 1847 and captaingeneral of the Philippine Is. in 1852. On the outbreak of the revolution in 1868 ho was placed in command of Queeu Isabella's troops, but was defeated at the bridge of Alcelea (1868)

and badly wounded.

Novalis, the literary name assumed by Friedrich von Hardenberg (1772-1801), a German poet and philosophor, born at Mansfeld, Prusslan Saxony. In 1789 N. was soot to Jena to study; in 1792 he went with his brother Erasmus to Leipzig University, and in the succeeding year to Wittcuberg, where he completed his studies. On leaving Wittenherg he studies. went to Armstadt, where he became enamoured of a lady, called by his blographer Sophia yon K. In 1795 N. went to Weissenfels, and was made auditor of the Saxon Salt Works, of which his father was director. The eight were found in the 19th, which his father was director. The and two have already been observed death of Sophia and of his brother in this century. The discovery of Erasmus, both in 1797, was a severe N. has been facilitated by the essential shock to N. Humns to Night are supamination of the photographic plates.

A characteristic of N. is a sudden time. N. commenced the romance

Novara (ancient Novaria), a tn., tl cap. of a prov. of the same name Piedmont, Italy, 27 m. W. of Mila

It has a magnificent cathedral, dating Halifax (undenominational), founded from the 5th century, and rebuilt in 1818. The fisheries are the most the 11th. There are important tex- important industry in N. S., while It was eeded to tile manufactures. the house of Savoy in 1735. In 1849 Charles Albert, King of Sardinia, was defeated here by the Austriaus,

and forced to abdicate. Pop. 45,000. Nova Scotia, a prov. of the Dominion of Canada, lying between 43° and 47° N. and 59° 40′ and 66° 25′ W. It consists of two portions, N. S. proper, a largo peninsula, and the island of Cape Breton (q.v.), separated from it by the Gut of Canso. N. S. proper extends 280 m. N.E. and S.W., or, including Cape Breton Is., 350 m. long from N.E. to S.W. The isthmus of Chignecto, 11½ m. wide, connects it with the prov. of New Brunswick. The Cobequid New Brunswick. n of hills stretches from W. and terminates Cape and terminates at Cape to. Beyond the fir-studded Chignecto. olitis of from 200 to 600 It., which onns of from 200 to 600 ft., which here and there overhang the coast, lies the fertile valley of the Annapolis. On the Atlantic side of the coast between Cape Canso and Cape Sable is situated the harbour of Hali-The Pictou harbour is the most important on the N. coast. Minas Bay, an inlet on the eastern arm of the Bay of Fundy, penetrates some 60 m. inland, and terminates in Cobequid Bay. Sable Is. is the most important island off the coast of N. S. The principal rivers are: the Annapolis, Ayou, Shubenacadie, the East, Middle, and West rivers of Pictou, the Musquodoboit, and the Lahave. The fresh-water lakes are: Lake Rossignol, situated in Queen's co., and 20 m. situated in Queen's co., and long; Ship Harbour Lake, 15 m. in length, and Grand Lake, both of length, are in Halliax co. The arc scatter vince. The

neo entered the Do-Baptists; there are not many Angli-cans. The local council consists of Canada. See Duncan cans. The local council consists of Campbell, Nova Scotia, 1873: J. C. a Lover House of Assembly and of Hopkins, Canada: an Encyclopædia the head of which is appointed a licutenant-governor by the federal grovernment for a term of five years.

Christianis and the problem of the property Roman Catl

Heinrich von Oefterdingen in 1800, but free and compulsory. The chief uninover completed it. His works were versities are: King's College, Windsor collected and edited by his friends (Anglican), founded in 1790: Acadia Tieck and Schlegel.

University, Wolfville (Baptist),

lumbering, the manufacturing wood pulp for paper, and mixed farming occupy an important section of the population. The Intercolonial Railway, owned and worked by the Dominion government, is the chief means of communication with the other provinces. The Canadian other provinces. The Canadian Pacific and Grand Trunk railways have running powers within a certain part of the colony. The history of N. S. dates from the visit of the Cabots in 1497-98, but not until 1604 was any attempt at colonisation made by Europeans. In that year a number of French colonists established themselves here. The settlements formed on the modern sites of Annapolis and St. Croix (New Brunswick) were assailed by the Jesuits in 1613 and the English colonists of Virginia, both of whom expelled the French. The old name of the colony, which was Acadia, was changed for N. S. by Sir William Alexander in 1621, who received a grant of the peninsula from James I., intending to colonise the whole of it. Having found, however, that the localities suitable for settlement were already occupied, the colonists re-turned to the mother country. The French were granted the possession of the colony by the Treaty of St. Germain-en-Laye (1632). The French settlers, however, quarrelled among themselves, and Cromwell in 1654 sent a force to occupy the settlement. Charles II., by the Treaty of Breda (1667), restored N. S. to the French. But not Breda (1667), nntil Britain took possession of the eolony in 1713, according to the Treaty of Utrecht, was peace possible length, and Grand Lake, both of ecolony in 1713, according to the which are in Halifax co. The Treaty of Utrecht, was peace possible climate of N. S. is more temperate than that of New Brunswick, and of Paris (1763) France resigned all the air as a general rule is very elaim upon the country, and in wholesome. The population is 492,338. The principal peoples are of British descent, while at Luneburg there is a granted as early as 1758, and a German colony. The Mccinas Indians fully responsible legislative assembly are seatter. in 1848 through the of Joseph Howe. In neo entered the Do-

government for a term of five years. Christianity after reaching manhood. Education throughout the colony is and was admitted to holy orders by

Fablan. In the discussion about those t who had lapsed during the Decian persecution (250-51) N. opposed the policy of leuiency adopted by Cor-nelius, Bishop of Rome. N. was in consequence put forward by his followers as a rival bishop. A Roman synod pronounced him schismatic, and ho was excommunicated; but his influence spread, and Novatianism was long established in Carthage, Alexandria, Constantinople, and in Asia. They claimed to be especially pure, and adopted the name of Cathari. In their doctrine they denied the power of the Church to absolve from sin, and excluded all convicted sinners from the communion of the Church. Novation, the merging of one legal obligation into another so as to ex-

tinguish the former and give a right of action only on the latter. For example, A owes B £100 for money leut, and later signs a cheque for the amount. B. cannot sue A on his personal obligation to repay, but only on the cheque; and if the bank on which the cheque is drawn should fail in the meantime B would never get his money. A N. is invalid unless both parties consent to it. For example, the N. may take the form of substituting a new debtor (delegation in Scots law), and no creditor is bound without his consent to forego his rights against one man in oxchango for rights against another who might well turn out to be a 'man of straw.' Au important effect of N. is that the extinction of the old debt or obligaextinction of the one action the first and equities, e.g. helrs, attaching thereto, the reason being that the second contract stands on its own independent footing; but it would be otherwise if the new obligation expressly incorporated all the incidents of the old one. The term N. is rarely employed in English law, the effect of merger of old obligations being determined either by the ordinary principles of contract (q.v.) or hy statute, e.g. in the case of transfers of the busie.g. in the ease of transfers of the business of life assurance companies by son of Vincent N. Ho hecame a amalgama

Novaya : large islands separated by the Matoch-lin Shar. N. Z. forms a continuation of the Paë Khoy hills, with Vaigach Is. between it and the mainland. number of fjord-like inlets lie on the E. coast of N. Z. between the Matochkin Shar and 75° N. The W. coast is fretted with hays and promontories. On the S. is situated the hay

the N. end of which is S. Goose Cape, thus forming the S. extremity Goose Is., in 72° N. Moller B lies between Goose Land and Cape Britwin, with several minor bays. On the W. coast of the N. island are Krestovaya, Mashirin, and Nor-denskjold bays, and to the N. are several groups of islands—Gorbovyi, Pankratier, the Gulf Stream and the Orange Is. N. Z rankratier, the cult stream is, and the Orange Is. N. Z. is mountainous, possesses many lakes and streams, and is intersected by deep, narrow valleys. Very little is known of the interior. The Novgorod hunters are said to have visited the island in the 11th century. With the discovery of the N.E. passage in 1553 began a series of expeditions. Iu 1556 Stephen Borough was the first western European to reach the eastern extremity of the island. The famous Baron Nordenskjold investigated the whole of N. Z. in 1876-77. Among the later explorers are H. J. Pearson (1895-97) and O. Ekstam (1900-3). The elimate varies in parts, and glaciers are rare. There is practically no animal life on the island. There are a few iemmings and brown and white bears. Ou the coast abound birds, whales, seals, walruses, and dolphins. There is a small Russian colony on the S. island.

Novelda, a tn. in Spaiu in the prov. of, and 15 m. N.W. of the tn. of, Alicante. It has manufs of face, and thore are sulphur springs in the neighbourbood. Pop. (est.) 12,000. Novellæ, see JUSTINIAN'S LEGIS-

LATION. Novello, Clara Anastasia (1818-1908), an English soprano singer, daughter of Vincent N., born in London and trained in Parls. She made her first public appearance in England ln 1832, and from then until her retirement in 1860 sho was regarded as one of the greatest vocalists in concert, opera, and oratorlo, both in England and on the Continent. See her Reminiscences,

complied by her daughter (1910).

ng the publication of cheap Novaya the coast nstead of publication by suhwhileh it belongs. It consists of two scription. Henry Littleton hecame a large islands separated by the Matchipartner in the firm in 1861, and, on J. A. Novello's retlrement in 1866,

sole proprietor; but the firm has cou-tinued as Novello & Co. Novello, Vincent (1781-1861), an English musleian and composer, bern in London, where he held posts as organist from 1796-1822. He calted the Musses of Haydn and Mozart, the of Sakhanlkha. Farther N the works of Palestriua, and other fine Kostin Shar Straits separato Mezh-dusharskiy Is. from the coast, to Ho composed a vast quantity of

sacred music, and with his publication | date, the best is Xenophon of Epheof the first volume of his original work in ISII laid the foundation of the publishing firm of Novello & Co.

Novels. The N. and the so-called romance may conveniently he included here under the common definition of prose narrativo fiction.

I. Ancient classical prose fiction.—
The earliest Greek compositions of a fictitious character, of which we possess any knowledge, are the Milesiaca, or Milesian Tales, said to have heen written chiefly by one Aristides. In Greece Proper, nothing was done, so far as we know, in the way of N. or romance, until after the ago of Alexander the Great. Clearchus, a disciple of Aristotle, wrote a history of fictitious love-adventures, and is thus, perhaps, to be considered the first European Greek novelist, and the first (

react Chris Dlog four

Apis... beyond Thulo), was founded on the wanderings, adventures, and loves of Duias and Dercyllis. The first names that occur in the now series are Lucius of Patra (Patrensis) and Lucian, who flourished in the 2nd century A.D., during the reign of Marcus Antoninus. The next notable name is that of Heliodorus, bishop of Trikka, who flourished in the 4th century A.D. This Christian writer, whose Loves of Theagenes and Charicleia is really tho oldest extant crotic romance, has far excelled all his predecessors in everything that can render a story interesting or oxcellent; and his charming fiction obtained a great popularity among such as could read, and all the subsequent Erctikoi deliherately imisuhsequent Erclikoi deliherately imitated his style and manner, while he was not less certainly used as a model by that once eclebrated but dreadfully tedious school of heroic romauce which flourished in France during the 17th century, and whose hest-rememhered representative is Mademoiselle de Scudéri. Tasso, Guarini, d'Urfé, and several other modern writers, have drawn many particulars—sometimes almost verlation of the Arabian Nights are in omore than that the races of Western Europe were houndlessly ignorant, credulous, and wouder-loving. Mediæval romance appears to have had its root and droundation in Cluvalry, and although the exploits and the marvels may have often been from foreign sources, yet the batim-from

Theagenes and that next inv.... point of time, the Daphnis of Longus, is of a totally character. It is a simple at.

sus, whose romance, entitled Ephesiaca, or the Loves of Anthia and Abrocomas, is in ten books. It is, however, perhaps worth mentioning, that in the romanco of Xenophon we meet for the first time with the story of the love-potion, the pretended death, and the mock-entombment of the heroice, which forms the leading incident in Shakespearo's Romeo and Juliet. Then there appeared a work which was essentially a romance. and was composed expressly for the purpose of recommending the ascetic form of Christian life, the Barlaam and Josaphat, the author of which is unknown. This during the middle ages was translated into every language of Christendom. In the 2nd century A.D. Appuleius wrote his Ass (called from its excellence the Golden It supplied Boccaccio with some of his stories, and the author of Gil Blas with the picturesque incidents of the robbers' cave, and contains in the episode of Cupid and Psyche one of the lovchest allegories of classical antiquity

2. Romantic fiction in Western Europe is a completely new growth, the product of ucw historical circumstances, which were but very slightly affected by Byzantine influences; and it transports us into a world of ideas, sentiments, beliefs, and actions, as different from what we find in the Erotikoi as could well he imagined. Erolikoi as could weil ne imagineu. When we read the Erolikoi we are reminded that we are in the midst of a corrupt and decaying civilisation; when we turn to the romances of chivalry, we feel that we are in the presence of a youthful, healthy, vigorous, and growing social life. These romances generally consist of a creates of extraordinary and utterly series of extraordinary and utterly

> from foreign sources, yet the scenery, sentiment, and life of horoughly reflect the of the earlier ages of ie inediæval romances

nto three great series:

the costume of medieval knights. The principal are the romance of Jason and Medea, of Hercules, of Œdipus, and of Alexander. They are all written in French, and the first two profess to be the work of a Raoul

le Felire. 3. Development and influence of fiction in Italy .- The Italians originated no romances of the kind de-seriled above. The carliest Italian work of this sort is the Cento Novelle Antiche, commonly called Il Novel-lino. It is a compilation by different hands, all unknown. It was followed in 1358 by the Decameron of Boccaceio, the finest in point of humour, sentiment, and style, but not more original in the matter of story than Il Novellino. Its influence on early European literaturo was prodigious. Chaucer aud Shakespeare in England have been in particular greatly in-debted to it for incidents and plots; while in France Boccaccio had a number of distinguished imitators. In his own country his influence was so overwhelming that for some centuries Italian novelists could do nothing more than attempt to copy him. The principal of these imitators are Franco Sacchetti, Ser Giovanni, Salerno, Sabadino Agnolo Firenzuolo, Massuccio di delli Arienti, Agnolo Firenzuolo, Luigi da Porta, Molza, Giovanni Brevio, Girolamo Parabosco, Marco Cademoste da Lodi, and Giovanni Giraldi Cinthio. Cinthio was the greatest favourite of all the Italian novelists with the Elizabothan dramatists. Besides these we may mentiou Antonio Francesco Grazzini, Stra-parolo, and Bandello. A few words may also be devoted hero to a very different class of fiction—the spiritual romance. It originated in the boson of the Church. The first of the series is Barlaam and Josaphat, but by far the greatest work of the kind produced during the middle ages is the Legenda Aurea, or Golden Legend. Besides these may be incutioned a species of spiritual tale, the Contes Dévots, provalent in Franco during the 12th and 13th centuries, which was writton by monks. ROMANCE OF THE 16TH AND 17TH

CENTURIES.—During the 16th and 17th t kinds of N. w romanue,

romance.

(3) the pa:

mentioned, a fourth perhaps deserves (ever) at the vices of the clergy, the mention, in which the heroes of an-crooked ways of politicians, and the tiquity are grotesquely tricked out in jargon of philosophers. The next remarkable romance of a comio nature is the Vita di Bertoldo of Julio Cesare Crocc, a work recounting the humorous and successful exploits of a clever but ugly peasant, which for two centuries was as popular in Italy as Robinson Crusoe or the Pilgrim's Progress in England. A few years later appeared Don Quixote (see Cer-VANTES), in which 'war to the knifo' was proclaimed against the romanees of chivalry. Almost contemporaueous with Don Quixotc was another Spanish romance, Matteo Aleman's Life of Guzman Alfarache, which gave hirth to a host of Spanish romances with heggars and scamps for heroes, of which the best is the Lazarillo de

> of the series is the Utonia of Sir Thomas More; next comes the Argenis of Barclay, published in 1621; and to the samo class helong a variety of French romances, of which hy far the most famous is the Telémaque of Fénelon. Pastoral romance.—The first important work of the kind is the Arcadia of Sannazzaro, written in Italian. It was followed by the Diana of Montemayor, written in Spanish, several of the episodes of which are borrowed from the Italian novelists, while Shakespeare has in turn directly taken from it the plot of the Two Gentlemen of Verona, as well as some of the most Midsummer ... in this class ney's Arcadia. first of this heavy series was the Ills suo-Polexandre of Gomberville. cessor, Calpronede, wroto Cleopatra, Cassandra, and Pharamond. But the most prolifie of the school is Madame

NOVELS AN 18TH CENTURY nations that r guished themse....

Grand Cyrus,

of fiction during this century were England and France.

de Scuderi, whose principal romances are Ibrahim ou l'Illustre Bassa, Clelic,

Histoire Romaine, Artamenes ou le

t kinds of English prose fiction.—During the The comic age of Elizabeth and her immediate romance, successors, the

almos

is certain that at the beginning of the probably had its prototype in La 18th century England was entering on Princesse de Cleves and Zayde, by the most prosaic, unimaginative, and Madame La Fayette; but the first the most prosaic, unimaginative, and unheroical period of her history. Its characteristics are faithfully reflected in most of her novels, which possess a great historical value apart altogether from their literary merits. The first name that occurs is that of the notorious Aphra Behn, the greater number of whose novels, of which Oronoko is the best known, appeared towards the close of the reign of Charles II. But the first novelist of great genius belonging to the new era is Daniel De Foe, tho father of modern English prose fiction, in whose writ-English prose fiction, in whose writings—The Adventures of Captain Singleton, The Fortunes of Afoll Flanders, The History of Colonel Jack, etc.—the coarse, homely, unpoetical, but vigorous realism of the time is strikingly apparent. Robinson Crusce is the finest and the most famous of all that along of faction rulich was axall that class of fiction which was extensively cultivated in both France and England. After De Foe comes Richardson, whose novels are Pamela. Sir Charles Grandison, and Clarissa Harlows. Fielding thought Richardson untrue to nature, and wrote his first novel, Joseph Andrews, as a burlesque on the style of his predecessor. Like his subsequent performances, Tom Jones and Amelia, it represents society as Fielding's sharper eyes saw it—on the whole, gross, vulgar, and impure. Smollett continues to paint in the same spirit. His chief paint in the same spirit. His chief works are Roderick Random, Peregrine

impossible to class him with any of his contemporaries. Four years later appeared Goldsmith's Vicar of Wakefield, in which a change for the better, in a moral point of view, is first noticeable. With the exception of Richardson, all the novelists above mentioned are usually described as humorists. The publication of Percy's Reliques re-awakened an interest ln the age of chivalry and romance. The first of the modern romantic school was Horace Walpole, whose Casile of Otranto appeared in 1769. It was followed by Clara Reeve, the authoress of tho Old English Baron; but the greatest genius in this line was undoubtedly Mrs. Radcliffe, whose Mysteries of Udolpho and other works were even obundant by initiated. were once abundantly imitated. Her ablest successors were Matthew Gregory Lewis, author of The Monk. and Maturin, author of Montorio.
Romance in which the incidents,

though natural, are purely imaginary.
—This class corresponds with the modern conception of the novel, and Hoffmann.

great name that adorns it is that of Mariyaux, whoso Vie de Mariamne and Paysan Parvenu were long in high favour. Next to Marivaux comes the Abbé Prevot, cluefly remembered by Manon L'Escaut. Other writers belonging more or less strictly to the same division are Madame Riccoboni and Rousseau.

Humorous and satirical romance.—

By far the of this kind

the Diable Louis de Salamanque of Le Sage. Voltaire may fairly claim to rank among these in virtue of his Candide, Zadig, L'Ingénu, and La Princesse de Baby-

lone.

Fairu tales, ctc.—The immediate Fary tates, ctc.—The inmediate forerunner and prototype of the French fairy tales was the Pentamerone of Signor Basile, This attracted and stimulated the fancy of M. Charles Perrault, whose Histoires ou Contes du Temps passe appeared in 1697. His principal successors were the Comtesse d'Aunoy, Mme. Murat, Mile. do la Force, and Mme. Villeneuve, whose *La Belle et le Bèle* (Beauty and the Beast) is perhaps the most beautiful creation of this

fantastic form.

Prose fiction of Germany during 18th and 19th centuries.—Towards the close of the century writers became more numerous, and as the literary activity of many of them continued on till the first or second quarter of the 19th century, it will be most convenient and natural to treat both centuries together. The first eminent German novelist of this period was Wieland. The principal names of novelists influenced by Richardson and Fielding are August la Fontaine, Wetzel, Müller, Schulz, and Hippel. Almost contemporary with these there flourished for a brief period (1780-1800) a school whose works bad their poetic counterpart in Schiller's Robbers. The chief writers of this 'turbulent school of fiction' are Cramer, Spiers, Schlenkert, and Veit Weber. Alone, and far above all others in redundancy and originality of fancy, humour, and pathos, towers Jean Paul Richter. Apart from all schools stands Johann Wolfgang Goethe (q.v.), whose novels, as well as his poems, are poetico-philosophic efforts to represent, perhaps to solve, the great facts and problems of human life and destiny. Other distinguished names are those of Ludwig Tieck, De la Motte Fouqué, Chamisso, Hein-rich Steffens, Achim von Arnim, Clemens Brentano Zschokke, and

19TH CENTURY: English fiction,-Almost the first novelist that we encounter in the 19th century, Sir Walter Scott, is probably the greatest that England, or even the world, has ever seen. Possessed at once of far greater antiquarian learning, imaginative genius, sound seuse, and in-stinctive taste, than any of his romantic' predecessors, he knew precisely what to shun and what to ohoose. The political reaction that took place in Britain showed itself in literature too, and Sir Walter Scott was its grandest representative. He strove to delineate the Past as it seemed in the eyes of men who were dubious of the Present and afraid of the Future. The overpowering genius of Scott necessarily led to 'endless imitation,' but the only one of his followers that holds a tolerably or ms followers that holds a tolerably decent position in literature is G. P. R. James. Galt and Wilson portrayed aspects of Scottish life which the author of Waverley has passed over. Moore's Epicurcan has all the sparkling and superficial splendours of his verse. After Scott, the next novelist who distinctly marks a new stage in the development of fiction is Sir Edward Bulwer Lytton. During the middle half of the century the greatest names are unquestionably greatest names are unquestionably those of Diokens, Thackeray, and Miss Evans; but besides these might be mentioued a host of others, who have attained either celebrity or popularity, or both. We have the nantical novels of Marryat; the political novels of Benjamin Disraeli; tho sporting and military novels of Lever; the brilliant 'muscular Christian' uovels of Kingsley; the 'governessnovels, as they have been aptly denominated, of Miss Bronte; the 'sehool' novels of Hughes and Farrar; and the 'sensational' novels of Willie Collins, Miss Braddon, and others. authors uot less eminent aro Mrs. Oliphant and Charles Reade.

French fiction during the 19th century.—The only tolerably gifted writer of fiction who figures during the First Empire is Le Brnn. Chateaubriand and Madame de Staël may be mentioned, and Charles Nodler, though voluminous, was uot an original novelist. After the revolution of 1830 France began to display a wonderful literary activity. Unhappily for the purity of its literature, the régime of the restoration, which followed the deliverance of France from a military despotism, was itself a buse, corrupt, and profligate thing, and the poetio witchery of a religious mystlelsm cannot blind as to the fact that the substance of most of the Freuch defected by a contract of the contract

Novels and Romances of the Kock, Balzac, the Dumas, father and the Century: English fiction.—
most the first novelist that we enunter in the 19th century, Sir alter Scott, is probably the greatest at England, or even the world, has et seen. Possessed at once of far eater antiquarian learning, imaginates the second state of their contemporaries.

Kock, Balzac, the Dumas, father and son, Sue, Madame Dudevant, though wholly dissimilar to each other in the one would be in the baser element of the national fiction. Victor Hugo and eater antiquarian learning, imaginates the second state of their contemporaries.

In a comprehensive sketch like the present it would be a blemish to omit at least the names of the more eminent American novelists, as they have contributed not a little of late years to the stock of English prose fletion. The most notable are Brockden Brown, Fenimore Cooper, Washington Irving, Edgar Allan Poo, Nathaniel Hawthorne, and Oliver

Wendell Holmes. The foregoing is a short summary of the earlier 19th century N., and it remains to give a still moro brief account of the novelists of the later part of the century. This must be brief for two reasons-first, because many of these authors are still living, and this article is to exclude such; and second, because the worth sifting influence of time has yet to be effective. On the whole the tendency of the novel of this period is away from the exclusive consideration of individual character and actions and towards the examination of grave social problems. This tendency did not reach its maximum in the period under discussion, but there is abundant evidence of its existence. Chief among these fin de siècle novelists aro George Meredith and Oscar Wilde in England, Anthony Trollope and Mark Twain in America, Emilo Zola in France, and Tourgeniev and Leo Tolstoy in Russla. For further details, see articles under these names and see armores under these names and also articles on many living authors. See also Dunlop's History of Fiction (London), 1314; G. Saintsbury, The English Novel, 1913.

November, the eleventh month of the year, derives its name from the Latin novem (nine), as, nutl the Julian arrangement, it was the pinth.

November, the eleventh month of the year, derives its name from the Latin novem (nine), as, nntll the Julian arrangement, it was the ninth month of the old Roman year, which began in March. There are thirty days in the month; the 11th was considered by the Romans as the beginning of winter, and the epulum Joyls (banquet of Jupiter) was held on the 13th.

Noventa: 1. A vil. of Ituly in the prov. of Vincenza, 17 m. S.W. of Padua. 2. A vil. of Italy, on the Piave in the prov. of, and 17 m. N.E. of the city of, Vonlee. Pop. 6000.

despotism, was itself a base, corrupt, lounded W. and N. by the government of the religious mystless ments of St. Petersburg and Olonets, cannot blind as to the fact that the stretching from S.W. to N.E. 450 m. stretching is neurably immoral. Paul do The S. is occupied by the Valdai

elevations of middle Russia (600 to over 1000 ft.), as well as the sources of two colonies; and she at last of nearly all the great rivers of the had to fight desperately for her country. Forests occupy about 55 per cent. of the total area. There are vast bcds of Devonian limestone and sandstone overlaid with carbonisandstone overlaid with carboniferous limestone, dolomite, sand-stones, and marles thronghout the country, and numerous remains of the Neolithic Stone Age are found. The chief river, the Volkhov, flows from Lake Ilmen into Lake Ladoga, and all boats from the Volga to St. Petersburg pass through this government. The sovere climate and marshy solirender agriculture very unprofitable. The sovere climate and marshy soil render agriculture very unprofitable. Fireclay, coal, and turf are extracted. The chief industries are: building, fishing, shipbuilding, and the domestic arts. The peopleare exclusively Great Russians. The Orthodox Greek Church claims about 96 per cent. of the population

the population.
Novgorod, formally known Velikey Novgorod (Great Novgorod), a tn. of Russia and cap. of the gov. of the same name, and the seat of the or the same name, and the seat of the archbisbop of the Orthodox Greek Church. The town is situated 119 m. S.S.E. of St. Petersburg, and lies on the banks of the Volkhov, 2 m. from its source in Lako Ilmen. Pop. 26,972. The kremlin, or citadel, is situated on the N. shore of the river, and includes the cathedral of St. situated on the N. shore of the Ives, and includes the cathedral of St. Sophia, which was built about the middle of the 11th century. It fell into decay, but was restored between 1893 and 1900. In this building are preserved many valuable relics. The preserved many valuable relics. Yaroslav Tower is lustorically connected with the common council which used to meet there. There is also a monument creeted to commemorate the thousandth anniversary of the foundation of Russia (built 1862). Another similar monument has been erected to perpetuate the repulse of Napoleon in 1812 Previous to the Tartar invasion, N. with Kiev was the chief centre of the Russians. They selected their princes from the sons of their liberator Yaroslav, or the other branch of the family of Rurik. They carried on trade with the Hanseatio and Scandinavian cities, and colonised the basins of the Northern Dwina. They also descended the Volga in the 14th century, and made trading expeditions as far as Siberia. Their peace was at last disturbed by their struggle against the Suzdal reign, followed by the arganehments of the peditions as far as Siberia. Their peace was at last disturbed by their struggle against: the Suzdal reign, followed by the acroachments of the Swedes and Germans. These invaders they repulsed in the battles at Robert 1883. See The M.P. Ladoga (1240) and Pskov (1242). The marshes of, their country prevented a Mongol invasion in 1240 - 42.

plateau, in which are the highest Ivan III. and his Moscow followers had to fight desperately for her liberty, which she did with small success under Marthe Boretskaya, the mayor. Ivan III. entered N. and deprived her of

(the Terrible) bi and put some 15

to the sword. position on the water-lughway from Volga to St. Petersburg and her connection with the trunk-road to Moscow, her commercial importance can never hope to regain its former Its manufs, and trade are position. insignificant.

Novgorod-Syeversk, a tn. of S.W. Russia in the gov. of Chernigov. 110 m. N.E. by E. thereof, on the r. b. of the Desna. There are brickfields, tanneries, and manufactures of soap.

Pop. 10,000. Novi, or Novi Ligure, a tn. of Piedmont, Italy, in the prov. of, and 14 m. S.E. of the city of, Alessandria. Weaving and the manufacture of silk goods are important industries. Pop.

18,000. Novibazar, or Novipazar, the cap. of the sanjak of N., European Turkey, on the Rashka, 120 m. S.E. of Bosnaserai. Chief features are the old church of St. Peter and St. Paul, and the ruins of an ancient citadel and Roman baths. The town is of great trategic importance surrounded by a 18,000.

strategio importance, surrounded by a ring of forts and commanding the main highways between Bosnia, Scr-via, and Montenegro. Pop. 12,000. The sanjak has an area of 2840 sq. m. and a population, consisting chiefly of

Slavs and Albanians, of 175,000.
Novice, an appellation given to persons of either sex, who live in a monastery in a state of probation, before becoming professed members of a monastio order. The N. must bave attained puberty before enter-ing, and remain at least twelve months. Any one new at a business is also termed a N.

Novikov, Madame Olga (née Kireef) (b. 1840), a Russian political writer, born in Moscow. She lived much in oorn in Aloscow. She lived much in England, making many influential friends, including Gladstone, Kinglake, and Carlyle, and striving by her writings to bring about an Anglo-Russian friendship and alliance. Under her maiden initials 'O. K. 'she contributed to the English papers

Novikov, Nikolai Ivanoviteh (1744-1818), a Russian author who founded a review at Moscow entitled Jivo-pissets (the Painter) in 1769, and managed the Gazette of Moscow. The review was suppressed in 1774. was later imprisoned by the order of Catherine II.,

until the reign of include Russian and the Dictionar

Novo-Cherkask, or Novo-Teher-kask, cap. of the Don Cossaeks ter., S. Russia, at the junction of the Don and the Aksai, 40 m. from the Sea of Azov. It has a flourishing trade. Its new eathedral was completed in 1904.

Pop. 53,473.

Novo-Georgievsk: 1. Or Krylov, a tn. in the gov. of Kherson, S. Russia, at the junction of the Tyasmin and the Dnieper, 17 m. W.N.W. of Krcmenchug; has a large trade in timber, grain, and eattle. Pop. 11,214. 2. Or Modlin, a first class fortress of Russian Poland, 23 m. N.W. of Warsaw, at the junction of the Narev and the Vistula. Sustained severe sieges in 1813 and 1830-31.

Novograd-Volinski, a tn. in the gov. of Volhynia, W. Russia, about 50 m. W.N.W. of Zhitomir. Pop. 17,000.

Novo-Hamburgo, a German colony in Rio Grande do Sul, Brazil, about 32 m. N.W. of Porto Alegre.

Novo-Moskovsk, a tn. in the gov. of Ekaterinoslav, Russia, on the R.

Samara. Pop. 13,000.

Novo-Petropolis, a German colony in Rio Grande do Sul, Brazil, 45 m. N. of Porto Alegre. Pop. 12,000. Novo-Radomsk, a th. in the gov. of

Piotrkov, Russian Poland, on the r. b. of the Warta. Pop. 12,500.

Novorossiisk, a seaport of Russia, on the Black Sea, 60 m. W.S.W. of Ekaterinodar. Has trade in ecreals and petroleum. Pop. 45,000. Pop. 45,000. and petroleum.

Novotcherkask, or Novo-Tcherkask, see Novo-Cherkask.

Novo-Uzensk, a tn. in the gov. of

Samara, Russia, on the Uzen, 110 m. S.E. of Saratov. Pop. 14,000. Novo-Zybkov, a tn. in the gov. of Chernigov, Russia, 68 m. N.N.E. of It manufactures Chernigov. candles, saileloth, pottery, and carriages, and also has tanneries. 16,000.

Nowawes, a vil. of Prussia, suburb of Potsdam, with a weaving industry.

Pop. 23,754.

Nowgong: 1. A dist. of Assam, India. Area 3843 sq. m. Pop, 260,000. 2. Cap. of the dist. of the same name, on the Kalang R., 60 m. E. by N. of Gauhati. Pop. 5000. 3. A tn. and a military cantonment, Bundelkhand, India. Its college was established in memory of Lord Mayo. Pop. 12,000.

Nox (Gk. vvš), in mythology, was the personification of night. According to most writers Nox and Erebus were the children of Chaos, and they, in their turn, gave birth to Æther and Hemera. She is usually represented as winged, and clothed in some dark material.

Noy (or Noye), Sir William (1577-1634), an English jurist, attorney-general, was born in Cornwall. In 1603 he was elected to parliament, and until his death sat for Cornish constituencies in every parliament save one. Some years before his death he changed his allegiance to the court party, and in 1631 was made attorneygeneral. He was in favour of the imposition of the famous 'ship-money tax. Among his works may be men-tioned On the Grounds and Maxims of the Law of this Kingdom, 1641; The Compleat Lawyer, 1661.

Noya, a scaport in the prov. of Corumna. Spain, 45 m. S.W. of Corunna. Manufactures includo paper.

soap, and leather. Pop. 10,000.
Noyeau, or Cremo de Noyeau, a
French liqueur. It is usually manufactured from brandy and flavoured with bitter almonds or the kernels of the peach or apricot stoue. There are two varieties of N.-pink and

white. Noyes, Alfred (b. 1880), a poet and author, began his literary career as a contributor to various magazines, among them, Blackwood's, The Spectator, Fortnightly Review, The Bookman, The Cornhill, and The Nation. Ho has also written for American publications, and in February 1913 left England for a tour in the United States, where he lectured on poetry. Among his other works are: The Loom of Years, 1902; The Flower of Old Japan, 1903; The Forest of Wild Thyme, 1905; Drake, 1908; William Morris (English Men of Letters), 1908; The Enchanded Island and other Poeus 1909: The Transle of 1908; The Enchanted Island and other Poems, 1909; The Temple of Beauty, 1910; and Tales of the Mermaid Tavern, 1913.

Noyes, John Humphrey (1811-86). founder of the Perfectionists, born at Brattleboro, Vermont, U.S.A. oventually founded a community at

Putnoy, the ter communism in ... marriage. The second to Oneida, Now York, but N. found himself in difficulties owing to lds free ideas with regard to marriage. wroto The Berean, 1847: The Doctrine of Salvation from Sin explained and defined, 1843; History of American Socialism, 1870.

Noyon, a tn. in the dept. of Oise. France, 67 m. N.E. of Paris. Its cathedral dates from the 12th century. It has also a bishop's palace.

Nubar Pasha (1825-99), an Egyptian statesman, born in Smyrua; educated in the Christian faith, and studied in Europe. He was secretary to Abbas Pasha, and afterwards to Ismail Pasha. About 1867 he became Minister for Foreign Affairs, and while he held that office was instrumental in bringing about the use of mixed courts of law to try cases be-tween Egyptians and Europeans. From 1884-88 and 1894-95 he held chief power under the English.

Nubia, a tract of country, with no precise limit, in N.E. Africa, anciently known as Ethiopia. The ancients gave the name of Ethiopia to the W. bank of the Nile, from Meroe to the bend of the river. The name may have been derived from the Egyptian and Coptio Noub, or Gold, a name still retained in Wady Nouba, which extends from the frontier of Dongola, N. of the Wady Seboua, abovo Derri.
The traot between Seboua and Assouan is called the Wady Kenous crossed by long 72° W. Its capital is Diocletian removed hence a Lybian Chillan (q.v.). Area 3555 sq. m. Pop. Diocletian removed hence a Lybian tribe, called Nobatæ, to the district above Syene to oppose the Blemmyes, who inhabited the western desert, now held by the Ababde and Bisharein Arabs. The dominion of the Pharachs, when most extended, reached to tho Isle of Argo, the last place where the monuments of the Egyptians have been found. Under these monarchs been found. Under these monarohs it was called Kush, and was governed by a royal scribe, entitled Prince of by a royal scribe, entitled Prince of Kush, or Ethiopia, till the twentieth dynasty, when it appears to have been recovered by a series of native rulers, who ultimately conquered Egypt; and although driven back, finally extended their rule from Meroe to Syene, tho most southern city held by the Egyptian monarchs, the Ptolemics, and the Romans. These Ethiopians adopted the civilisation of the Egyptians, and the names of of the Egyptians, and the names of somo of their monarchs have been preserved. The subsequent fortunes of this country will be seen under ETHIOPIA. The modern inhabitants consist principally of Arabs, who invaded the country after the rise of Mohammed, the principal tribes being the Djowabere and El Gharbye, who inhabit from Assouan to the Wady inhabit from Assouan to the Wady the old town. Pop. 19,000.

Halfa. This part of the country is called Lower N., and is under Egyptian jurisdiction; Upper N. belongs to the Anglo-Egyptian Sudan.

The chief attractions of this country to travellers are the numerous temples and other anoient remains of the length of the leng and other ancient remains of the cipe. Mahogany, cedar, and other Egyptians, extending from Phile to timbers are exported. Pop. 4500. the island of Argo. These consist of Nuevo Leon, a state of Mexico, on

The chief industries are sugar rofining, the temple of Isis, in the Isle of Philippe, tanning, and the manufacture of textille goods. N. is the birthplace of talvin. Pop. 7300. Ra, by Ataramen, and continued by the Romans; Tafa or Taphis, the modern Kalabshe, built by Ra-meses II.; the rock temple of Beit e Meses II.; the rock temple of Detr C Welly, recording the conquests of the same monarch; Wady Halfa, built by Osertcsen I.; the rock temple of Ibsamboul, built by Rameses II.; Gebel Addeh, built by Horus of the eighteenth dynasty; Ibrim, built by Amenophes II.; Amada, founded by Thothmes III.; Ghersheb, Schoua, and Derri, built by Rameses II.; Dakkeh, the ancient Pselois, built by Ergamenes; the Colossus of the Isle of Argo; and the Pyramids of Meroe and Tanquassi.

Authorities .- Nubian Texts (edited Authornies.—Nuoran Texts (edited by C. A. Wallis Budge, British Museum), 1909; The Egyptian Sudan (London), 1907; Our Soudan: its Pyramids and Progress (London),

1905.

170,000.

Nucleus (Lat. nucleus, kernel; nux, nut), the name given to the central portion of a comet. A bright comet consists of three portions, the star-like N., which fades by insensible gradations into the coma or nebulous haze surrounding it, and the tall, stretching in a direction away from the sun. The nuclei and comas of different comets vary in luminosity, but it is rarely that they can be separated by the naked eye.

Nucleus, see CELL. Nuddea, see Nadiya.

Nueces, a riv. of Texas, U.S.A., rises in a plateau in the southern part of the state. Its course of about 400 m. is generally S.E. to Corpus Christi Bay in the Gulf of Mexico.

Nuenberg, or Neuenburg, a tn. of W. Prussia prov., on the Vistula, 48 m. S. of Danzig. Pop. 5155.

Nueva Ecija, a fertile prov. of Luzon, Philippine Is. Capital, San Isidro. Area 3840 sq. m. Pop. 133,000.

Nueva San Salvador, a city of Salvador, Central America, 110 m. S.W. of Tegucigalpa. It was rebuilt in 1854 after an earthquake had destroyed

the N.E. slope of the E. Sierra Madre. chief classes of public N. are: (1) The Montrey is the capital. Sugar and grain are grown. Area 24,324 sq. m. trades or manufactures. In these Pop. 368,929.

Nugent, James (1822-1905), an English philanthropist, born at Liverpool. The Catholic Total Abstinence League of the Cross, which now bas many branches both in this country and America, was founded by him in 1872. He also established the 'Save tho Boy' Refuge and a

Magdalene Home.

Nuisance is a comprehensive term in law. Though it is not difficult to say what acts or omissions in practice constitute a public or common N., and render the offender liable to criminal proceedings, it is by no means easy to say exactly when an act or omission will amount to a private N., so as to ground a civil action at theinstance of an individual. In principlo the distinction between public and private Ns. is not one of kind, but depends rather upon the extent of the operation of the evil, and it is for a jury to say whether a and it is for a july to say whether a sufficiently large number of peoplo are or may be affected so as to render a N. criminally punishable. The difficulty of determining in any individual case whether an act amounts to a private N. arises from the fact that private Ns. for the most part concern ono's control or enjoyment of land or house property, and neither judges of fact nor juries are disposed to curtail the liberty of the subject by construing as a N. an act which is incidental to or arises out of the carry-lng on of an otherwise legitimate business. For example, it may be that the owner of adjacent vacant land proposes to sell his land to a company which intends to huild a soap factory on it; but there is no remedy (apart from the possible effects of restrictive covenants) against the company to provent the carrying on of that soap manufactory other than an action for damages, or for an injunction to prevent them from so carrying it on, as by the emission of smoke or the causing of a great noise and vibration as actually interfero with the enjoyment of the house as a dwelling-house. A public or common N. is an act or omission which disturbs or is liable to disturb the normal state of order and comfort of the public. Public Ns. aro indictable (see Indictment) as misdemeanours, but will also form the ground of a civil action at the instanco of any one or more persons who can prove that they are peculiarly aggreeved or affected in some way over and above the anneyance caused to the public at large.

carrying on of offensivo or dangerons trades or manufactures. In these cases it must be shown that the trade or manufacture in the way it is carried on is so offensive to the senses of smell and hearing (for the practical English mind has not yet risen to the level of prohibiting criminally orcivilly anything which merely offends the eye or spoils a 'fair prospect') as to detract scusibly from the enjoyment of life and property in its neighbour-hood. (2) Ns. to highways, bridges, and public rivers, e.g. pitching rub-hish on to a road, polluting a river with factory refuse, causing riotous crowds to assemble, etc. (see also HIGHWAYS). (3) Bawdy, disorderly houses, gaming and betting houses, unlicensed or improperly conducted play houses. (4) Lotterics (q.v.). (5) A large and heterogeneous numplay houses. ber of acts empirically referred to tho class of Ns. by various judicial decisions, e.g. eavesdropping, keeping a corpse unburied if the defendant can afford the burial, publicly exposing persons afflicted with infectious afflicted with Private Ns. include inter diseascs. alia: (1) Acts derogating from the enjoyment by an owner or occupier of land or house property of which he is actually in possession, e.g. flooding hy the diversion of a watercourse, undermining by excavation, (2) Acts amounting to obstructious of rights of way or other easements or rights over the property of others, e.g. unlawfully enclosing a common, putting a gate across a public footway. (3) Acts amounting to a continuous in-terference with the health or comfort of another in the occupation of bis property. It is to ho noted that a person is not debarred from a remedy by reason of having ' come to the N., thoug or co interf tho

may long acquiesocnee. Instances of modes of annoyance held to be private Ns. are persistent ringing and telling of large bells, loud musio and noises incidental to circus performances, disorder from crowds attending firework displays, and obstruction of ancient lights (see Light, light To).

and t (Polle

The principal and most effective remedy for a private N. is the injunction (q.v.), to the ciain for which may be added a claim for damages. Abatemont, or self-redress, though often successfully carried out in the case of obstructions to highways, is both hazardous and unsutisfactory. In the case of a public N. a local sanitary

expenses and penaltics from the See Pollock On Torts: offender. Russell On Crimes; Harris, Principles of the Criminal Law.

Nukha, a tn. of Russian Transcau-casia in the gov. of Elizavetopol, 60 m. N.E. of the town of same name. The breeding of silkworms and a silk industry is carried on. Pop. (Tartars

and Armenians) 25,000.

Nullification, in the history of the U.S.A., a term used to denote the action of a state for rendering null and void any Act of Congress, or Federal Act, regarded by the state as unconstitutional. The application of the doctrine of N., or, more fully, N. and secession (i.e. from the Union) and secession (i.e. from the Onion) received its strongest expression in S. Carolina in 1830, during the agitation against the notorious Tariff Act of 1823, which imposed excessive duties on raw material and imported manufactured in the company of the company o factures, and which has ever since been known as the 'Tariff of Abominations.' The doctrine of N. is associated largely with the name of John C. Calhoun of S. Carolina, then vice-president, but afterwards senator, who, in response to the invitation of the political leaders of S. Carolina, wrote the celebrated South Carolina Exposition of 1828, a document which after opening with the assertion of the unconstitutionality of the Tariff Act. discusses the right of the state to declare the Act null and void within the ambit of its own territory. This argument is based on the assumption that a Federal constitution is merely a contract entered into not by all the people of the U.S.A. but by cach of the states, and that each component state has a right, consistently with its inherent sovereignty, to decide when, so far as its own boundaries are concerned, there has been any infraction of the contract by Congress. The S. Carolina 'Nullifiers,' having obtained no relief from Congress up to 1831, inaugurated a campaign for the calling of a state convention to nullify the tariff. This policy at once split the whole country into two factions the 'Nullifiers' or 'the State Rights and Free Trade Party,' and the 'State Rights and Union Party,' Congress then made various concessions by amending the Tariff Act, in spite of the fact that the Nulliflers failed to secure a two-thirds majority of each branch of the Federal legisla-But as the Aot had not yet actually come into effect the Nullifers resisted famine and the sword, when did not abate their efforts, and at the it surrendered. The town was razed ensuing election carried all before to the ground, and the few survivors

authority can require the offender to them, with the result that a state abate the N. within a specified time, convention held soon afterwards and if he omits to do so within the solemnly declared the Tarif Act (and period allowed, can not only itself its amending Act) null and void abate or remove the N., but recover [Ordinance of Nullification]. But the antipathy between North and South was too deep to allow the Nullfiers to win in the long run, and after the struggle over the Force Bill (empowering Jackson to collect the tariff duties in S. Carolina by force), a com-promise was effected and the Ordin-ance of Nullification repealed. It is difficult to say how far the doctrines of N. is at all a valid principle of the constitution at the present day; but on the assumption that the ordinary courts are the sole arbiters of the constitutionallty or otherwise of any Act the provisions of which happen to come before them, it is probable that the doctrine is obsolete. See The Cambridge Modern History, vol. vii., 1905. Nullity of Marriage, see Marriage.

Nullum Tempus Occurrit Regi (literally, 'Time does not run against the king'), a legal maxim which expresses the general rule that the right of the crown to sue or prosecute cannot bo barred by lapse of time, and that the crown, unless expressly named, is not bound by the Prescription Acts. (As to the effect of lapse of time on the legal rights of the subject, see LIMITATIONS, STATUTES OF.) But there are TIONS, STATUTES OF.) But there are many exceptions: (1) The erown cannot claim real property after adverse and uninterrupted possession by the subject for a period of sixty years; (2) succession duty (see DEATH DUTTES) cannot be recovered atter twelve years from the death giving rise to the succession, nor after six years if the Inland Revenue authorities knew of the rights of the sights. ties knew of the rights of the crown and omitted to takeaction; (3) actions for quit-rent or other perpetual rent or arrears in Ireland are barred after sixty years; (4) prosecutions for treason and misprision of treason (i.e. coneealment), but not cases of attempted assassination of the king, must be undertaken within three years after the committal of the crime; (5) proceedings against usur-pers of corporate offices must be taken within six years after the usurpation; (6) summary proceedings before justices must be taken as a general rule within six months of the commission of the offence.

Numantia, an ancient tn. of Spain, in Hispania, Tarraconensis. It commanded a position of great natural strength, being situated on a steep hill. In 134 B.C. it was besieged by the Romans, under Scipie Africanus the younger, and for fifteen months it

were sold as slaves. 'Numantinus' was a was given to the victor Scipio. The village of Gnarray marks the site of the ancient town. Recent excavations (1905-10) have revealed the entrenchments of Scipio.

Numa Pompilius, the second king of Rome, who belongs to legend and not to history. He was a native of Cures in the Sabine country, and elected king one year after the death of Romulus. He was renowned for his wisdom and his piety; his relgn was long and peaceful, and he devoted his chief care to the establishment of religion among his rude subjects. He was instructed by the Camena Egeria, who visited him in a grove Camena near Rome, and who hononred him with her love. It was he who first appointed the pontiffs, the augurs, the fiamens, the virgins of Vesta, and the Salii. He founded the temple of Janns, which remained always shut during his reign. He died after a reign of thirty-nine or forty-three years. Number of the Beast, see APOCA-

LYPTIC NUMBER.

Numbers, The Book of, forming the fourth book of the Hexateuch (q.v.), deals with the travels of the Israelites from the second to the fortieth year of the Exedus. It also contains various collections of laws, as, for example, in chaps. v. and vi. The particular institution of the Levites and a treatment of the priestly duties receive much attention (chaps. iil., iv., vill., xviii.). As in the case of Exedus, the two main lines of narrativo are J. E and P, which generally appear side by side, but are sometimes harmonised. The first ten chapters and the later on Levitical regulations are mainly due to P. Sec BIBLE. Numbers, Theory of. This scienco

consists of the investigation of the integral properties of whole or numbers, all incommensurable numbers being excluded. It may be considered as including the investigation of rational fractions. The goneral problem of the theory may be stated by the consideration of the solution of algebraic equations. If a given equation contains two or more un-principle of periodicity indicates a known quantit known quantit

minale, i.e. no . equation is pos..... to the case of several equations, the Egyptian decognaphie withing be taken total number of equations being icss (see Higher Lypnics), it will be seen than the total number of unknown quantitles contained in them. problem in the theory of numbers is to find every possible solution in which the unknown letters are integers. Soveral interesting properties of integers are proved by this theory. It is easily proved that the number of prime numbers is Infinite.

The - title, i problem of finding in how many ways a composite number, i.e. a number which is divisible by numbers other than itself and unity, can be resolved into two factors, is solved generally. It also proves that the product of n consecutive numbers is divisible by /n, i.e. n(n-1)(n-2) . . . 1, thus 20×21×22×23 is divisible by /4, i.e. 4x3x2x1. Several other important properties are proved, among which Fermat's theorem is perhaps the This states that if most important. p is a prime number, and N is prime to p, then Np-1-1 is a multiple of p. From the practical standpoint this theory is of very little uso. The data of practical applications of mathematics are in the nature of things only approximate, and thus any solution given in whole numbers is of very little interest. Thus this theory is very largely neglected by mathematicians, and is regarded by them as of mere theoretical importance. The first consideration of the theory probably took piace in India, but the first book on the subject was written by Diophantus, the theory sometimes being called Diophantine Analysis. For further reading, the most interesting books are Legadro's Théorie des Nombres, and Garus's

Disquisitiones Arithmetica.

Numerals. There are, according to the copious literature on the subject, two original modes of constructing numerical systems: (1) By asystem of repetitions of a single unit, with the uso of somo hicroglyphic, or some other apparently arbitrary symbol by way of introducing the principle of multiplication when the repetitions become too many for practical use; (2) by the choice of letters of the alphabet. It has sometimes been assumed by paleographists that mere arbitrary invention is a third and obvious mode, and the Hindu N. have been adduced in support. But a little consideration will convince one that, however obvious it may be to suggest arbitrary signs for the N. from 1-9, the relative positions of such signs according to a decimal, sexagesimal or any other . merely arbitrary system can

Agalu, if the analogy of that what to moderns may seem arbitrary is in reality a slow develop-ment starting from a slauple if cumber-somo principle, and worked out by a gradual and highly ingenious celecticism. Lastiy, researches in Indo-Arabio paleography show that the Hindn system, all-linportant from the fact The that after being improved by the

Arabs it formed the basis of the denote thousands. Tens of thousands system now in vogue throughout Europe, though admittedly obscure in origin, is not only clearly of high antiquity, but roveals on inquiry a foundation of still older systems, which began the only obvious mode of constructing symbols of number, viz., by repetitions of a single unit, and develop gradually by the use of zero, and a truo denomination for each cipher, determinable on a decimal system.

The Romans and Greeks do not appear to have owed much to Oriental nations, and indeed the complete Indo-Arabic system with the zero was not introduced into Europe till the 12th century. Both the symbolical modes of expressing numbers to be found in Greck MSS, were taken from the Greek alphabet. In the older or so-called Herodian system (named after the grammarian who described it), the practice was to use the initial letter of the name of the number for its symbol, e.g. II for 5, \$\text{\Delta}\$ for 10, \$\text{\Heather the last pirate}\$) for 100, \$\text{\N}\$ for 1000, and \$\text{\M}\$ for 10,000. This system occurs largely on inscriptions. In all cases 5 of any symbol were written by enclosing the symbol in II: thus [2] is five tene, and |H| is five hundreds. The later system, which was widely used in tho ord century s.c., was to make the first nine letters of the alphabet do duty for the units, and the remainder for the tens and hundreds, while three disused letters (two of which were taken from the Phoenicians) were used as supplemental signs: these three were F, digamma, for 6, which later was written in the middle later was written in the mindue ages, \P , like the stigmu or combined σ and τ ; \P , koppa, for 90; and a sign called sampt for 900 (sam was an old letter written in Greek papyri in the British Museum as T, and from its resemblance to pi (π) was called sampt). This later Greek notation gradually superseded the Herodian and was as follows:— Herodian, and was as follows:-

β 2 1 ġ λ μ ν ξ 30 40 50 60 80 $100 \ 200 \ 300 \ 400 \ 500 \ 600 \ 700 \ 800 \ 900$

1000 2000 3000 4000 5000 6000 7000

8000 9000

When used as N. and not as text,

were indicated by dots, e.g. a. A. Special symbols were sometimes used for fractions, sometimes an accent or a line above the numeral indicated the fraction: as v or $v'=\frac{1}{2}$, $\gamma'=\frac{1}{4}$, $v\gamma'=\frac{1}{2}+\frac{1}{4}$, or $\frac{1}{2}$, $\gamma''=\frac{1}{2}$, $\delta'=\frac{1}{4}$ (Thompson's Greek and Latin Palæography).

Paleographists also uote the Greek practice of numbering the successive

ur books but they

are careful to point out that this practice was as much a method of naming as of cnumeration. The later Greek notation as detailed above was also in vogue among the Syrians and Hebrews. From the subjoined table it will be seen that the Hebrews gave the final letters a separate and particular value.

1 10 20 100 200 300 400 500 600 700 800 900

The great problem in all these various systems was to keep numbers of different denominations separate. It did not occur all at once even to the subtle Orientals to represent units, tens, hundreds, etc., by position, for the use of a sign for zero comes late in the developed Indo-Arabio notation. The old method of keeping digits distinct was by means of the abacus, or reckoning-board, consisting of balls strung on wires or rods set in a rect-angular frame. The abacus was used both by the Greeks and the Romans, and is still used in many Oriental countries, especially China, for com-plex calculations. The movable balls are used as counters to record the steps in an arithmetical operation, and each column or compartment represented a particular value to be assigned to a counter or ball placed or moved on to it. The moment distinctive symbols or ciphers are used instead of counters to represent the numbers from 1 to 9, and a sign for zero used, the abacus or any other similar mechanical contrivance becomes superfluous, and the problem of calculation by reference to position is solved. Apparently Europe owes the whole of its modern arithmetic to the Indians and Arabians, for the decimal system or mode of reekoning by tens through the instrumentality the letters were usually written with of the zero comes from India through a norizontal stroke thus, a, B, while, the Arabians, somewhere about the as shown in the table above, a stroke 12th century, it being generally agreed was added to the factor. was added to the left of the symbol to among paleographists that the once

celebrated Arabian mathematician, ben Musa, explained the system in Arabic, and that early in the 13th century, his work on algobra was translated into Latin (and called Algorithm or Algoritmi, a paraphrase of his name), and thereafter became the primary source of our knowledge of the use of Arabio N. Whether the Greeks arrived at the decimal system and the use of position and the zero as the most convenient mode of reckoning, independently of the Oriental nations, is apparently un-known. Certainly it seems that the value of position might soon have been suggested to them by the dash which, as shown above, was written on the left of a sign for thousands; at all events it is possible that from this use of the dash or stroko tho Greeks began to associate high numbers with position to the left. If then, e.g. 7000+800+40+2 were represented by ζ , ω , μ , and β respectively, it would be a natural step to eliminate the dash and run the four symbols together thus $\zeta_{\omega\mu\beta}$ with a line or vinculum over the top to differentiate from a mere word. The forms of our present N., 1, 2, 3, etc., and the zero are also borrowed directly from the Indo-Arabic system, though modified to some extent. The Eastern Arabio used a vertical stroke for 1, but as the ancient Egyptians, the Syrians, the Palmyrians, the Phomicians, and even the Romans, all adopted the same symbol, it was probably common to all ancient systems of notations based on repetitions of a single unit. Our 2, 3, 6, 7, 9, 0 are all to be found in the Ghobir AISS. almost in their integrity, while a symbol not dissimilar to our 4 is to be seen in Indian Cavo inscriptions (Burnell's South Indian Palæography). Curiously enough there is nothing like our 5 in the various ancient Indo-Arabio N., their signs for that number being far more like our 4.

It remains to uotice in some detail the Roman N., which in their origin fall into the second of the original modes of constructing systems, i.e. by repetition of a single unit. The systom was not alphabetical, despite the fact that C (100) and M (1000) are respectively the initial letters of centum and mille, and according to thobest authorities (e.g. Zangemeister) it was by a merely natural process that these symbols took the form of that these syndoos took the form of the letters that they happened most closely to resemble. N. were distinguished from letters by being written between dots, c.g. 'XV', while units with horizoutal strokes above were used to indicate thousands as at to small pleees of money. They occur alternative to the cumbersome mode principally in the Eccene, and are

of repeating M, e.g. III = 3000. Khwārazm, or Abu Ja'far Mohammed some MSS. are also to be found certain special signs. e.g. $q \approx 1000$. A cross stroke traversing a numeral was sometimes used to indicate reduction by balf a unit, e.g. $iii=2\frac{1}{2}$, $\chi=9\frac{1}{2}$, x = 191 (see Thompson, Greek and Latin Palæography). The vitality of the Roman system is astonishing; it was used throughout the middle ages, holding its own against the Indo-Arabic N., being even preferred for the calculation of money accounts, and, of course, it is still in use at the present day, though apparently course. fined to such purposes as the numbering of chapters in a book, and the chaptering of private statutes to differentiate them from public acts. For the Egyptian N., see under HIEROGLYPHICS.

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Indian Palæography, 1874.

Numerator is that part of a fraction Numerator is that part of a fraction which states how many parts of the whole are taken, the whole being divided up into the number of parts shown by the denominator. Thus is a fraction in which the whole is divided into three parts and two are taken, two being called the N.

Numerianus, Marcus Aurelius, a Roman emperor was the son of the

Roman emperor, was the son of the Emperor Carus, whom he accompanied on his expedition against the Persians. Carus was assassinated in 283 A.D., and N. was elected emperor by the soldiers, but was himself assassinated eight months

whilst on his way back to Rome. Numidia (Gk. Nomadia, the land of Nomads), the name given by the Romans to a part of the N. coast of Africa, corresponding to some extent with the modern Algiers. It was bounded on the W. by the R. Mulueha (now Mollya), which separated it from Mauritania; ou the E. by the R. Tusca (now Wadl-cl-Berber), which constructed it from the training of the construction of t which separated it from the territory of Carthage; on the S. It reached to the chains of Mt. Atlas. The inhabitants of N., as of Mauritania, belonged to the raco from which the modern Berber are descended.

abundant in the Bracklesham beds. ! formal written will made by a soldier If heated over a spirit lamp and then dropped into water they split transversely, and display numerous spiral coils which are divided into hundreds of tiny chambers. The side walls of the chambers are usually arranged in such relation to one another that they give the appearance of a series of radii from the centre of the shell. The shells vary in size from 4 to 2 in. in diameter.

Nummulitio Limestone, an Eocene formation, almost entirely composed of nummalites. It is often several thousand feet thick, and is widely spread over many parts of Central Europc, Asia, North Africa, and America. It attains an altitude of over 16,000 ft. in W. Tibet, and the Pyramids of Egypt are built entirely of it.

Nun (Lat. nonna), a woman who has consecrated herself to God by the threefold vow of poverty, chastity, and obedience and who has also bound herself to live in a convent From a certain rule. the beginning of the Christian Church the existence of women devoted to virginity and religious offices may be recognised, and it is probable that they early joined together in com-munities. Convents are normally under the authority of the bishop of the diocese in which they are situated, though certain ones are responsible only to the Pope. All nuns bound by solemn vows are under the obligation of repeating the diviao office in choir. The superiors are elected by the votes of the nuns, sometimes for life, but more usually for a fixed perlod.

Nunc Dimittis, or The Song of Si-meon, a canticle which forms part of the office of compline in the Roman, monastic, and most of the mediæval breviaries. It also appears in the order of evening prayer, where it is placed after the second lesson. The canticle is taken from Luke ii. 29-32.

Nuncio, see LEGATE.

Nuncomar, see Hastings, Warren. Nuncupative Will, a verbal will or oral declaration of one's testamentary intentions before witnesses. In general, a will, both in English and Scots law, is totally void unless made in writing. Soldiers or sailors over 14 years of age can dispose of their goods and chattels by a N. W., but since the Navy and Marines (Wills) Act, 1865, a N. W. made by a man in His Majesty's naval or marine forces will not be effectual so as to dispose of his wage or other money due to him by the Admiralty, though apparently the Admiralty havo a discretion to pay the wages to the claimant under an oral will. It is to be noted that the term N. W. is often applied to an in-

on active service, such wills generally being valid if sufficiently proved. It is doubtful how far the N.W. of a civilian is valid, but in all cases where effect has been given to such a will, it was satisfactorily proved that the testa-tor at the time of making it was in carrenis. (See Jarman On Wills.) In Scots law, a N. legacy is effectual to the extent of £100 Scots (£3 6s. 8d.), but the verbal nomination of an executor is useless. See also Donatio MORTIS CAUSA.

Nundydroog, a fortified hill situated in Mysore, India, 30 m. N.E. of Ban-galore. This fortress, which stands over 1000 ft. above sea-level, was stormed by the British in 1791.

Nuneaton, a par. and market tn. of Warwickshire, England, 81 m. N.E. of Coventry. Coal is worked in the vicinity, and there are large ironworks, and manufactures of woven worsted articles, elastic, cotton, hats, and ribbon. A nunnery. founded in 1150, gave the town its name, and on its ruins the church of

St. Mary was built in 1877. Pop. (1911) 37,083.
Nuñez (or Nonius), Fernan (c. 1470-1553), a Spanish writer and teacher, was born ln Valladolid. He was a professor of Greek at Alcala and Sala-manca universities. He published manca universities. He published various editions of the classics and helped to compile the Latin version of the Septuagint.

Nuñez de Arce, Gaspar (1834-1903), a Spanish poet, was a native of Valla-dolld. He excels especially as a writer of lyrio poetry, and has a considerable reputation as a dramatist. Among his poems are: Gritos del Combate (1875), El Vertigo (1879), La Vision de Fray Martin (1880), La Pesca (1884), while his dramatic works include: Como se Empeñe un Marido (1860), El Haz de Leña (1882). Sce M. Menendez y Pelayo, Don Gospar Nuñez de Arce (1882).

Nuñez, Rafael (1825-94), a president of Colombia, was born at Cartagena. In 1851 ho was elected member in 1851 ho was elected member of congress, and was on two occasions minister of finance. He atterwards became consul at Havre and Liverpool, and after his return to New York was elected president in 1880. He was re-elected to this office, and in 1886 was invested with the novers of a president for significant of the newers of a president for significant for significant states. the powers of a president for six He was elected president for years. the fourth time in 1892. Among his literary work may be mentioned his directorship of El Continental.

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tho R. Niger, and its cap. is Bida. ! Arca, 6400 sq. m. Pop. 153,000.

Nuphar, a genus of aquatic plants (order Nymphaceæ), of which two are N. luteum, the common vellow water-lily or brandy-hottle, is common in lakes and rivers. It bears large, yellow, strongly-scented glohose flowers and both submerged and floating leaves. A drink is prepared by the Turks from the flowers. N. pumilum, a much smaller plant, which

occurs in small lakes in Scotland. Nuraghe, Nurragghi, Nurags, arc e round towers of Sardinia, of which there are about three thousand. and which are of very great antiquity. These towers, which resemble the brochs of Scotland, and the talyots of Minorca, are built of various stones, such as granite, hasalt, and lime-stone, and consist of two or three stories, reached by means of a spiral staircase. Their original purpose is not known, nor is there any existing information as to their huilders. James Fergusson, Rude Stone Monu-ments in all Countries; their Age and Uses, 1872, and Sir Robert Lambert Playfair, Handbook to the Mediter-ranean (3rd ed.), 1890. Nur ed-Din Mahmud, Malek-al-

Adel (1117-1173) (surnamed Shahid' (the martyr) by Me (the martyr) by Mohammedan historians), a sultan of Syria, born at Damaseus. Ho succeeded his father as emir of Aleppo in 1145, and proceeded to try to expel the Christians from Palestine. The Christian defeat at Edessa led to the second Crusade, but by 1151 every Christian stronghold in Palestine was in his hands. He was defeated by Baldwin, King of Jerusalem, and narrowly escaped imprisonment; later, how-ever, he overthrew the Christian princes of Tripolis and Antioch. In 1169 he over-ran Egypt, and was created Sultan of Syria and Egypt by the calif of Bagdad.

the calif of Bagdad.

Nuremberg (Ger. Nürnberg), a city of Bavaria in the prov. of Middle Franconia, 100 m. N.W. of Munich. It is the commercial capital of Bavaria, and lies iu a saudy hut productivo plain.

Formerly among the

N. side of the town, dates from about the beginning of the 11th century, and was a favourite residence of German emperors in the later dio ages. The city also contains middlo ages. soveral tho best

the mast

shrine consisting of a bronze sarcophagus and canopy; and the church of Our Lady, which contains tho Tucherschoaltar. Among other public buildings are the Renaissance town hall, the Germanic national muscum, which includes a picture gallery containing works by Holbein, Dürer, and others, and the municipal library with about 80,000 volumes, and 2,000 valuable manuscripts. The city is an important commercial ceutre, and is the chief market in Europe for hops. The principal manufs. are articles in metal, carved wood, and ivory, 'Dutch' toys and clocks, and lead pencils. N. was the first of the imperial towns to embrace Protestant. ism. Pop. 332,800. See Cecil Headlam's Nuremberg.

Nurpur. a tn. in the Punjab, India, noted for its manuf. of shawls and

woollen goods. Pop. 10,000.

Nürschan, a tn. of Bohemia, Austria, The chief in-6 m. S.W. of Pilsen. dustries are coal mining and the manuf. of glass. Pop. 5671.

manuf. of glass. Pop. 5671.
Nursery Rhymes, jingling rhymcs invented for the amusement of children, or perhaps survivals of ancient folklore, invocations or incantatious preserved from remote antiquity. Many of them are without doubt sur-vivals from old English May-day eclebrations, ring-songs and dances which were once practised by grown-up The fingling metre and dog pcople. gerei rhymes, in which the sense is often sacrificed to the attempted rhyme, havo heen handed down orally from one generation of children to another. The verses generally consist of a rhyming couplet or a quatrain in which the second and fourth lines rhyme, and there is frequently a refrain accompanying the quaint old airs which have been handed down as their setting. The N. R. proper, embodying a tale set forth simply, and marked by either wit or pathes, is almost peculiar to the English tongue, the equivalents in the Latin or Teutonic tongues are more ornate and fantastical. The counting-out 'rhymes, iu which one word is dropped for each player and the one on whom the last word falls drops out from the ring, form a most interesting branch of felklere, and aro doubtedly of great antiquity. doubtedly of great antiquity. See Ker's Archaelogy of our Nursery Rhymes (new ed.,) 1837; Halliwell's Nursery Rhymes of England (6th ed.), 1860; Rolland's Rimes et Jeux de l'Enfance, 1883; Newell's Games and Songs of American Children, 1881; and Loucy Chisholm's Collection of Nursery Ithymes, 1911; also Nursery Rhymes (Everyman's Library).
Nurses, Royal British Association Nurses, Royal British Association

Krafft; St. Sebaid, with its eelebrated of, was organised in 1887, with the

fourfold object of improving the status, and St. Thomas's. Between 1842 and of the nursing profession, granting a 1851 several schools were formed on diploma after examination, estab-lishing a register of trained nurses, and carrying out benevolent schemes for the advantage of members. It administers the Helena Benevolent Fund, with invested property of £1250, for the relief of members in The association is controlled hy a council and executive committee of nurses and doctors. Its official organ is The Nurses' Journal (10, Orchard Street, London, W.).

Nursing. Sick N. has evolved into a highly skilled profession since the Crimean War. It has a long history. Previous to the 4th century the sick poor were housed in the Grecian, Roman, and Egyptian temples, and in ancient history names like those of Fabiola and the Empress Flocilla prove that even then women of substance could be found who would devote their time and money to the care of the sick. At the same time there were in existence hospitals, or at least some kind of dispensary system, for the sick poor in Egypt, India, Greeco, and Rome. Essentially, however, organised N. as a branch of medical treatment may be said to have taken its rise amongst the deacons of the early Christian Church. From the 4th century on, the develop-ment of N. was rapid, and the institu-tions were managed by the clergy, and the nurses recruited from the male and femalo monastlo orders. Throughout the Dark and Middle Ages this system obtained. The oldest institutions in England are St. institutions in England are St. Thomas's and St. Bartholomew's, and their names indicate their religious connection. The Reformation caused a secular system to be introduced. Some measure of systematic N. was not attempted until the middle of the 19th century, and until then all the skill that nurses possessed was acquired in the course of their work in the wards. Germany saw the hirth of the new system at the foundation of the justitute hy Paster Fliedner in 1836 at Kaiserwerth; and it was at this place that Florence Nightingale was trained. Male nurses had heen trained since 1799 at various institutions in Prussia, but the employment of male nurses is almost entirely German, and is apparently dying out even there. In England the only training schools for male nurses are those in connection with the army and navy. Pastor Fliedner's institute was soon followed by the formation of societics in Phila-

the Continent.

The publication of the horrors of the Crimean War gave a new impetus to the profession, and raised it considerahly in the public esteem. Florence Nightingale with a band of trained nurses underteek the administration of the hospitals, and reformed them as well as nursed the sick. The popular mind, however, was chiofly attracted by the sentimental aspect of it, and as a conmental aspect of it, and as a con-sequence N. has come to be regarded in a much higher light. As a result, too, in 1860, the Nightingale Fund Training School for Nurses was founded at St. Thomas's Hospital, with public subscriptions given in recognition of her great work; and all over the Coutivent similar schools were soon established. During recent years the influence of lygiene and medical science generally has made it essential that nurses should be highly

skilled and trained.

To enter the N. profession the cau-didates must usually he between the ages of 23 and 35, although sometimes the age is as low as 21; they must be physically and mentally strong; and have to serve from one to three months on trial before commencing their three years of training. It is not necessary to pay a premium, and wages (usually £10 the first year, £15 the second, and £20 the third) are pald. Most of the larger hospitals take paying probationors, who in re-turn for a fixed premium receive shorter periods of instruction. The duties are in both cases the sameexcept that paying probationers are exempt from night duty and from the heavier portions of ward cleaning— and are not confined to waiting on the sick. The prohationer has to wait on the staff nurse or sister as well as on patients when required; attend lectures on medical and surgical subjects; aid in the dusting of wards; the washing of patients; and the cleaning of utensils and instruments. At the close of the training period a certifi-cate is given, and those who qualify may serve as staff nurses, or leave to take up special N Private N. staffs, recruited from the staff nurses, are usually attached to hospitals, and for private these supply nurses In special hospitals the patients. training may only take one or two years, while in most of the hest training schools the period may be four years.

Among the several institutions or societics which nurses may join, the most noteworthy is the Queen Vicdelphia (1838) and in London (1840). most noteworthy is the Queen Vio-The latter was founded by Mrs. Fry, toria's Juhilee Institute for Nurses. and the nurses were trained at Guy's This was founded with the surplus

(£70,000) of the Women's Jubilee 1 Offering, which gives an income of about £2000 per annum. Four centres at London, Edinburgh, Dublin, and Cardiff, are maintained with this, at which nurses are trained for their special work, while in addition to these about five hundred branches are scattered over the country. Nurses who bave thus been trained are entitled to be known as Queen's nurses, and to wear a special hadge. training at an approved bospital and serving a trial of one month, nurses who wish to join this association, enter one of the centres, and undergo six months' training in district N., and if country nurses, three months' training in midwifery. Nurses in privato institutions either receive a fixed salary plus a honus, according to length of service, or a percentage of their carnings, or they receive all their earnings minus a percentage deducted for the upkeep of the home. There is a marked difference usually between the salaries paid to nurses and the fees charged for their services, but arguments can be advanced to explain arguments can be advanced to explain the discrepancy. The largest benefit society maintained by, and for, the profession is the Royal National Pension Fund; and usually private homes oither provide pensions or assist their staff to join this society. For special training, e.g. fover, insanity, massage, monthly nursing, midwifery, and children, nurses, with the contract of the con usually enter one or other of the numerous special hospitals, and according as the special training is more or less difficult than the ordinary training, so the period of training is either longer or shorter.

The work of N. should not be taken up lightly, and demands physical

health and strength, good temper, self- bh

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advocate the staffing of male wards with male nurses. Many of the duties in such wards are essentially men's. There is no doubt, for instance, that the lifting of leavy patients is a task beyond women, and they should not be asked to do it. Again, a sensitive man finds it irksome and disagreeable to be attended by women for various necessary offices, and because of this will often endeavour to do without such assistance, and so prejudice his chances of recovery. For further in-formation see Burdett's Hospitals and Asylums of the World; The Nursing Profession (annual): Hamplon's Nursing; Andersou's Medical Nursing;

Eva C. Lückes, Lectures on General Nursing, and Hospital Sisters and their Duties; Florence Nightingale's Notes on Nursing; Burdett, How to become a Nurse; Drinkwater, Sick Nursing; Honor Morten, A Complete System of Nursing.

Nusle, a tn. in the crown land of Bohemia, Austria, a S.E. suburb of Prague. Pop. (including that of Pankratz, the vil. adjoining) about 31,000.

Nut, strictly a fruit, with a woody pericarp which decays to set free the seed or seeds (c.g. hazel, heech, acorn, and Spanish chestnut). The fruit of the horse chestnut is properly described as a herry-like capsule. Most of them are rich in oils and starches. and their value as food has received much attention in recent years. Many nutritious articles of dict, including butter substitutes, are propared from them. The most important are the cocoa-nut, brazil, walnut, chestnut, bazel, cashew, pea-nuts.

Nutation (Lat. nutatio, nodding), a movement of the carth's axis, causing an apparent advance and recess of the stars to the poic, and an oscillation of the equinoctial points regularly in-creasing and decreasing the longitudes and right ascensions of the stars. is due to the varying actions of the moon and sun on the equatorial protuberance of the earth, which cause the precessional circle to be wavy. There are strictly three Ns.: Luna nutation, due to the revolution of the moon's nodes, with a period of 181 years, amount 9.2"; Monthly nutation, due to changes of moon's declination, too small for measurement: Solar nutation, due to the changing decimation of the sun, period one year, amount 1.2".

s about the size of a jackdaw, having brown hack, with a long white spot on each tail, dark brown head, white tipped outer tall-feathers, black feet, and a black bill. In flight and habits it resombles the jay. It feeds on frult, a variety of insects, and also the eggs and young of small birds. The nest is a big clumsy structure, and in it about three eggs are inid, which are very light green, spotted with pale brown.

Nut-Galls, see GALL-FLIES. Nuthatch, or Sitta Europæa, a passerino bird fairly common in the S. half of England and in Europe. plunogo is bluish grey above, and the uuder-surfaco is light reddish-brown or buff; the throat is white, and the tail-feathers have white tips. The bill is powerful and wedge-shaped, and is used to force away the bark in the search for hiscots, as well as to break nuts. It is a skilful cilmber, abie to de601

other tree-climbing birds its first toe steamers and gunboats on the lake, is much developed. The nest is made and a German gunboat. commonly in a hole in a tree, and the mouth of it is plastered up with mud, except for a hole just big enough to give the bird admittance. In it are laid about seven white eggs, spotted

laid about seven with reddish-brown, of Essex co., New Nutley, a tn. of Essex co., New Jersey, U.S.A. Plush, paper, eutlery, and leather goods are manufactured. Pop. (1910) 6009.

Nutmeg, the kernel of the fruit of several species of Myristica, of the natural order of Myristicaceae, tropi-cal trees or shrubs, natives of Asia, Madagascar, and America. The fleshy part of the fruit is rather hard, and is often eaten as a sweetmeat, resembling caudied fruit; the nut is enveloped in a curious yellowish-red aril, the mace. Ns. yield a peculiar yellow fat, called oil of mace, and by distillation colourless au almost essential oil.

Nutrition, see BLOOD, CIRCULATION, DIET, DIGESTION, ABSORPTION, RE-SPIRATION, SECRETION, and EXCRE-

TION.

Nux Vomica, the seeds of a small evergreen tree, Struchnos Nux Vomica (order Loganacere). The sceds are eircular and disc-like, about the size of a halfpenny, and covered with soft fawn hairs. The tineture of the British Pharmacopæia is made by treating the sceds when finely powdered with rectified spirit. The tree occi as in the The

rind 3 pulp white and gelatiuous, and a number of seeds are produced in cach fruit. They have been used to produce a brown dye. The existence in them of strychnine and brueine was not discovered until the early part of the

19th century.

Nyam-Nyams, see NIAM-NIAM.

Nyangwe, a in. and Arab trading station, in Belgian Congo, on the r. b. of the Congo above the Stanley Falls. Livingstouo first visited it in 1871.

Nyanza, ALBERT NYANZA, seeNYANZA, and VICTORIA The two lakes formerly EDWARD known as Albert Edward Nyanza are now known as Lake Albert and Lake

George.

Nyasa, or Nyanja, a largo lake in S.E. Africa, discovered by Livingstone in 1859. Its greatest length is 350 m., and its breadth from 15 to 45 m.; with a total area of 14,000 45 m.; with a total area of 14,000 sq. m. It lies 1650 ft. above sea-level. shores: Germany

sceud a tree head downwards. As in divide the castern. There are British

Nyasaland: 1. German, that part of German E. Africa which touches the N. and N.E. shores of Lake Nyasa. It consists of a fertile plain to the E. of the Livingstone Mts. and the volcanie peaks to the N. which oulminate in Mt. Rungwe (10,400 ft.). Langenburg is the chief settlement. A railway from the shore of Lake Nyasa is designed to connect it with Dar-es-Salaam. 2. Portuguese, that part of Portuguese E. Africa which includes the northern district of Mozambique, and extends from the eastern and south-eastern shore of Lako Nyasa. to the Indian Ocean. It is a rich and as yet undeveloped mineral area. The surface is largely open veld traversed by fertile valleys. A railway is pro-jected from Porto Amelia on Pemba Bay, the chief trading outlet of the district, to the lake.

Nyasaland Protectorate, see BRITISH

CENTRAL AFRICA.

Nyblæus, Johan Axel (b. 1821), a Swedish philosopher, born at Stockholm. In 1856 ho was appointed professor of philosophy at the University of Lund. His chief works are: Den filosofiska forskningen i Sverige från slutet af 18. århundradet, 1873-97, his masterpiece; Om stalens straffrät, 1879, and Trenne filosofiska uppsatser, 1878.

Nyborg, a seaport on the E. coast of Funcu Is., Denmark, in the co. of Svendborg, 17 m. E.S.E. of Odense. The fortifications built by Christian IV. were destroyed in 1869. Pop. 3000.

Nyctaginacem, a natural order of herbaceous plants, shrubs, and trees, found chiefly in the tropical regions. Among the best-known genera are Bougainvillea and Mirabilis.

Nyetalopia, a defect in the vision of people who can see distinctly in a faint light only, and not in bright daylight. The term is sometimes applied to the opposite defect of vision, by which some people are unable to see distinctly save in light of

great intensity.

Nyctanthes Arbor-Tristis, or Tree of Sadness, a small Indian tree (order Oleaceæ) bearing a number of fragrant, white flowers which open and fall in the night. The tree is culti-vated in India and is occasionally grown in stovchouses in Britain.

Nyeteriba, or Bat Lice, a genus of wingless, bloodsucking flies parasitie They somowhat resemble flattened spiders, but are less than a The lake has abundance of fish, and quarter of au inch in length. They is drained by the Shire into the Zambesi. Great Britain holds the western the legs are long, and the probaseis and Portugal filiform. The eggs hatch within the mother's body where the larval state is entirely passed.

Nye, Edgar Wilson, better known as Bill Nye (1850-96), an American humorist, horn at Shirley, Maine. In 1886 he settled in New York and won great popularity as a humorist and

Nye, Philip (c. 1596-1672), an Eng-in theologian and independent divine. His nonconformity led to his giving up his curacy and retiring to Holland (1633). Ho was one of the Assembly's Commis-Westminster sioners to Scotland (1643); he took part in the Savoy Conference (1658), and strongly opposed the re-imposition of the Covenant (1660). At the

Restoration he fell into disgraco. Nyerup, Rasmus (1759 - 1829), a Danish author born at Nyerup iu Danish author born at Nyerup iu tubers in w Fünen, Denmark. He was a uoted strong ioar seholar and was appointed professor of literary history at the University intended to Gropenhagen (1796). He published varieties a sunk tubs. Historie, 1800-3, which he carried further in Udsigt over den danske Diglekonst under Kong Frederik V., rank, alwa 1819; and Bidrag til en Udsigt over den danske Diglekonst under Kong Christian VII.

Nyzzhin, a tr., in the gov. of Cherni-

Nyozhin, a tn. in tho gov. of Chernigov, Russia, 62 m. S.E. of Chernigov. Tohacco is manufactured. Pop. Pop.

47.000.

Nykjöbing, a scaport of Denmark on the W. ceast of Falster Island, 94 m. S.S.W. of Copenhagen. It is the see of the bishopric of Laaland-Falster. Pop. 7700.

Nyköping, a scaport and the cap. of Södermanlän, Sweden, at the head of the Byfjord, on the Baltic, 98 m. S.W. of Stockholm. It has a good harbour, and exports iron and zine ore, timber,

wood-pulp, and oats. Pop. 9500. Switzerland, on the Nyland, a prov. of Fluland on the Lako of Geueva. N. coast of the Gulf of Finlaud. Cap. Helsingfors. The soil is marshy but fertile in some districts. Area, 4580

sq. m. Pop. 280,000.

Nylghau, Nilgai, or Blue Ox, a large nntelopo occurring in Central India. The male is slate or dark grey, darkening with ngo, the legs are black; the female is fawn or reddish-brown. On the throat is a white patch and below great popularity as a humorist and punster. He published: Bill Nye and the Boomerang, 1881; Forty Liars, back slopes down as the shoulders, but the Blossom Rock, 1885; Remarks, 1886; is about a third smaller, and lacks Chestnuts, 1885; and with J. W. borns which in the male are black, Riley, Railroad Guide, 1883; Fun, Wit, and Humor, 1889; Comic History of the United States, 1894; Comic History of England, 1896.

Nye, Philip (c. 1596-1672), an England, 1896. it hangs a tuft of dark huir. The malo makes valuable leather.

Nymphæa, a genus of beautiful aquatic tuherous-rooted perennials (order Nymphæaceæ). N. alba, the white water lily, is fairly common in British lakes, broads, and slow rivers, and bears entire floating leaves and large flowers. From this and other species a jargo number of hybrids havo been raised, and the range of colour is very wide. They are introduced into ornamental water by placing the tubers in willow hampers containing a strong loam mixed with cow manuro, and sinking them where they are intended to grow. Some of the smaller varieties are successfully grown in

Nymphs, in Greek mythology, a ciass of femalo divinities of inferior rank, always depicted as beautiful maidens of eternal youth, connected manens of eternal youth, connected with the forces of nature, and generally with semo dividity of higher rank, Artemis, Apollo, Pau, and Hermes. They were divided into the Oceanides, N. of the open sea, and Nereides, N. of the inland seas; Naiades, who presided over rivers, brooks, and lakes; Orcades, N. of the mountains and crettes among the mountains and grottos, among whom was Echo; and Dryades or Hamadryades, who dwelt in the See Krauso, Die forests and trees. iorests and trees. See Krauso, Die Ausen, Grazien, Horen und Nymphen, 1871: and F. G. Ballentino, Some Phases of the Cult of the Nymphs, 1901. Nyon, a tu. in the cauton of Vaud, Switzerland, on the N.W. shore of the Lake of Geueva. Pop. 5084.

Nystad, a scaport of Finland, on the Cult of Bothula, 36 m. N.W. of Abr.

Gulf of Bothula, 36 m. N.W. of Aba. A treaty between Russla and Sweden was signed hero in 1721. Pop. 1000.

links it with u. Indeed, Anglo-Saxon not pay to oultivate in most parts

as besides us, and often transcribed i by o. There is no c

y o. There is no (

tian hieroglyphics, therefore, that as the Semitcs called | day of the restoration of Charles II. O Ayin which means 'eye,' the symbol was intended to be ideographic. The Hebrew o, however, was not a sometimes worn in memory of the vowel, but 'a voiced glottal stop,' into tunlike the hin huge. In the primitook refuge in an oak-tree, when tive Greek alphabet the letter was used for δ, ou, and δ. Later another symbol was devised for δ, namely Ω, 1903), an English organist and comcalled omega in Greek grammars to poser, born at Ealing, Middlesex; symbol was devised for δ, namely Ω, 1903), an English organist and comcalled omega in Greek grammars to poser, born at Ealing, Middlesex; 1903), and among his componairs, for o + o contracted to ou (cf. sitions are orchestral and ohorpairs, for o + o contracted to ou (cf. sitions are orchestral and ohorpairs, for o + o contracted to ou (cf. sitions are orchestral and ohorpairs, sound.

Oadby, a par, and vil. of Leicestershire, England, 3\forall m. S.E. of Leicestershire, with manuts, of boots and shoes.

ter, with manufs, of boots and shoes, by E. M. Oakeley (1904).

Pop. (1911) 1800.

Oahu, see Hawaiian Islands.

Oajaca, or Oaxaca, a state Mexico, at the S. end of the Isthmus of Tehuantepec. It is mountainous,

1,041,035; of town 37,469.

Oak. The British O., with its wide leaves, usually along the midrib. A distribution throughout great parts and most important of its genus formerly used on a large scale in the (Quercus). Three well-marked variemonest O. over the greater part of England, Ireland, and the Scottish Lowlands; its acorns have long stalks [E.S.E. of Melton Mowbray. There and its leaves are stalkless or nearly lare manufes of hoofs and shoes. Ponand its leaves are stalkless or nearly are manufs. of boots and shoes. Pop. so. The acorns of Sessiliflora are stalk- (1911) 3668.

O, the fifteenth letter of the English alphabet, is the only vowel in stalk. Intermedia, the Durmast, bears our language which really corresponds in sound with the o of German, bears acon-stalks, while the undersides of French, and other European lanthe leaves are downy. These two are naccentages. Besides the name-sound as in cone—a sound which, by the way, is represented by a variety of spell-other varieties occur but they are ings: though, yeoman, roe, hauthoy, etc., it has the short sound as in lot, unculate and Sessilifiora. O timber, and a third sound as in none which on account of its slow growth, does and a third sound as in none, which on account of its slow growth, does

ritain, though in combining the qualities of other timbers it rivalled for certain purposes.

Oakengates, a market tn. of Shropshire, England, 12 m. E. of Shrews-bury, Pop. (1911) 11,744.

Oak Fern, see Polypodium.
Oak-galls and Oak-apples. broken in the interior, and tropical on plant is more subject to the attacks the coast. Area 35,380 sq. m. The of gall-producing insects than the oak, state is well watered, and mining and and the abnormal production of plant agriculture are carried on. Indian tissue takes many forms, which are agricultural are carried on. Industri issue takes many loring, when are corn, coffice, sugar, cacao, wheat, remarkably consistent in their variety. fruits, tobacco, rnbber, and indigo Tho beautiful gall-wasp (Cynips are produced. The cap. Is Oajaca, in |kollari), for instance, invariably the central part of the state, on the causes the marble galls on young Rio Verde, 288 m. S.S.E. of Mexico. oaks, by laying its eggs which hatch It is the centre of a cochineal trade, into the fat grubs found inside the uno old cathedral. Pop. of state causes the formation of small cherry-1,041,035; of town 37,469. the see of a bishop, and possesses a galls. Another (Dryophanta scutellaris) like galls on the under-surface of the

Oakland, a city of California, U.S.A. I his slanders. In 1685 ho was found cap. of Alameda, on the E. coast of San Francisco Bay, 6 m. from San Shiphuilding, fruit-can-Francisco. ning, and tanning are the chief in- in 1688. dustries. Mnnufs, include cotton and woolien goods, shoes, pottery, etc. Pop. (1910) 150,174.

Oak Park, a vil. of Illinois, U.S.A., in Cook co., 9 m. N.W. of Chicago, of which it is a residential snhnrh. Pop.

(1910) 19,444.

Oaks, The, see Horse-Racing and his

RACE MEETINGS.

Oakum, a substance obtained from old ropes hy means of untwisting, loosening, and picking out the yarm, thus, hemp-fibro. It is chiefly employed to stop or prevent leaks, caulk the seams of ships, otc. Originally, the picking of O. was one of the chief employments of convicts, but nowadnys it is falling into disuse.

Oakworth, a par and tn. of W. Ridding, Yorkshire, England, on the Worth, 2½ m. S. of Kelghley. It manufs, worsted and cotton goods.

Pop. (1911) 4279.

Oamaru, a municipal bor, and seaport of New Zcaland, South Is., in the co. of Waltaki, on the E. coast, 50 m. S.W. of Timaru. It possesses one of the safest harbours in the island, and has an extensive export trade in frozen meat and agricultural pro-The neighbourhood is noted ducts. for the breeding of livestock, and also for its grain crops. Pop. 7100.

O Arad, see ARAD.

Oases (sing. Oasis), isolated fertile regions within deserts, due to the This may bo due presence of water. to springs, pools, or damp hollows in water-conrscs usually dry, watercourses from heyond the desert not They are generally vet dried up. arranged along the foot of a range of hills or mountains, or an outcrop of rock. Somo are of largo area, and form the homes of tribes. Many are being created by means of arteslan wells. Oates, Titus (1649-1705), an Eng-lish conspirator, born at Oakbum.

Having taken holy orders, ho held several curncics and a naval chapiaincy from which he was invnriably dismissed for vicious conduct. same thing inppened also when he entered the Romish Church. It was at this juncture (1678) that he forged his preposterons story of a Poplsh plot to murder the king, burn London, and slaughter the Protestants. perjured himself by making an atildavit before Godfrey, the ningistrate, and in splto of the palpable inconsistencies in his evidence succeeded in ereating a panic and in securing for himself a pension of £600, and a suito of rooms in Whitehall. The Duke of guilty of perjury and condemned to life-long imprisonment with floggings. He regained his liberty and pension

An O. may he deflued as a solemn declaration to n superior or divine being, or in the name of something held sacred, by which the doclarant undertakes either to speak tho truth or promises to do something in the future, on pain of calling down on hend divino or preternatural wrath. Os. of the former or assertory kind may be exemplified by the afildavit and the O. of n witness in a court of law; the latter or promissory kind by the O. of allegiance, by taking which a naturalised foreigner becomes a British subject. By the English law of evidence (q.v.) all oral testimony in any proceeding must be given upon O., except (1) under the Criminal Law Amendment Act, 1885, in the case of a child of tender years where, in the opinion of the court, the witness does not understand the nature of an O., and generally, in prosecutions under the various Acts for the prevention of crucity to children, unsworn evidence of children may be accepted; (2) under the Oaths Act, 1888, every person who objects to being sworn ou the ground either that he has no religious hellef or that the taking of an O. is contrary to his rellgious bellef, may make a solenin affirmation in this form: I. A. B., do solemnly, sincerely, and truly doclare and affirm, etc., omitting words of imprecation or calling to witness. The passing of the Oaths Act, 1888, was the result of the agitation of the celebrated Bradlaugh, member for Northampton, who, having objected to take an O., was allowed to affirm, subject to the risk of an action by a common informer. A successful action for penalties followed, but Bradlangh again sat in the House, administered the O. to himself, and voted nt a division. Another action at tho instance of the Attorney-General followed, hut Bradlaugh subsequently gained the day on being again returned to parliament, the second motion that he should not be permitted to take the O. not being carrled. The Act of 1888 effected the removal of the last of the tests for members of parliament, the others being the O. of supremacy, the O. of abjuration, the O. of allegiance, and tho deciration ngainst transub-stantiation. There were prior to 1888 other Acts making provision for the taking of Os. by Quakers, Roman Catholics, and Jews, but the Act of 1888 abolishes the necessity for any religions bellefs in taking an O., York and the queen were victims of whother by a member of parliament

or any one else. the great majority of English witnesses in the law courts still 'swear by Almighty God,' and kiss, or, since the Oath Act, 1909, simply hold, a copy of the N.T. Jews swear on the Pentateuch, and keep their heads covered; Scots witnesses affirm with the hand uplifted, while Chinese witnesses require a saucer to be broken before their consciences will permit Whether them to speak the truth. the O. has any very deterrent effect on meudacity is a matter of opinion, hut there is probably no greater injustice in the assumption that per-jury is committed in practically every action tried, than in Mr. Justice Darling's cynical remark: 'The truth will out, even in an affidavit.'

Oats as a food are the richest of the ccreals, containing the highest proportions of proteins and fat, and are valuable for all classes of stock, while their value for human food is gaining increased recognition. The origin of the cultivated species is unknown, none of them occurring in a truly wild state. Two main races are recognised, viz. common O. (Arena satira) with open spreading panicles, and Tartarlan O. (A. orientalis) with contracted one-sided panicles. The white and black varieties of the latter are more productive in warm climates, and are favoured for their tall stiff straw. The varieties of the common O. differ chiefly in the colour and thick-ness of the husk, the shape of the grain, the period of ripening, the length of the straw, and the tendency to shed the grain when ripe. Other species are weeds. The bristle-pointed O. (A. strigosa) and the short O. (A. brevis) are sometimes, like the common O., grown as green fodder.

Oaxaca, see Oajaca. Ob, or Obi (Oslak As or Yag, and Tatar Omar), a river of W. Siberia, somo 2200 m. long and with a drainage area of over 1,100,000 sq. m. It rises in the gov. of Tomsk, at the confluence of the Biya and the Katun, which both rise in the Altai Mts. In the main it follows a N. or N.W. direction, and finally, after receiving the Irtysh from the left and the Tom and Tohulym from the right, reaches the Gulf of Ob, a deep

of the Arctic Ocean.

Obadiah ('servant' or' worshipper' of Jehovah), one of the twelve minor prophets. Nothing is known of his history, and the Book of O., though the shortest of the prophetic writings, is the transfer of the prophetic writings, is the transfer of the prophetic writings, is at the same time one of the most diffieult and most interesting. Its twentyone verses are directed against Edom because of her behaviour to Judah in

At the present day over it. Edom shall be brought low ity of English wit- in spite of her wisdom and rocky fortresses, by the treachery of her former allies. The book shows parallels with parts of Jeremiah too close to be due to coincidence. There are strong obto coincidence. jections to the theory that oue horrowed from the other, and it seems probable that both were indebted to an earlier prophet whose work has perished. It is probable that the hook is composed of two parts, one preexilie, the other post-exilio, but the view has also been held that both portions were post-exilie. Few now consider that it is a pre-oxilic whole.

Oban, a seaport of Argyllshire, Seotland, 20 m. N.W. of Inverary. The little island of Kerrera shelters the excellent harbour from the Atlantic gales, and also accounts for its The picheing almost land-locked. turesque situation at the foot of the hills and the proximity of the ruins of Dunolly and Dunstaffnage castles have made the town a favourite centre for tourists to the west. Pop.

(1911) 6567.

Obe, Obi, Obeah, or Obia, the name given to a species of witchcraft practised amongst the negroes of W. Africa, and of the W. Indies. The apprchension of this sorcery is frequently attended with disease and death, by reason of its operation upon the superstitious fcars of the negroes. See JU-JU, WITCHCRAFT, SORCERY, etc. O Becse, a vil. of Hungary, in the

prov. of Bacs-Bodrog, on the r. h. of the R. Theiss, 47 m. S.W. of Szegedin, with an important trade in fruit and

grain. Pop. 20,000.
Obeid, El (Africa), see El OBEID.
Obelisk (Gk. ὁβκλίσκος, diminutive of ὁβκλός, a spit), a four-sided monumental pillar with a pyramidal top.
Corresponding to the Greek stelæ and Roman columns, they were placed in pairs by Egyptians at the entrance of temples or before gateways. Those that remain are of great antiquity. The Romans carried off several from Egypt, two of which, originally erected by Thothmes III. at Heliopolis, were taken by Augustus to Alexandria. These are popularly known as 'Cleopatra's Needles,' one being brought to London in 1877 and the other to New York in 1879. obelisk in Paris, one of a pair of Rameses II., which stood at Luxor, was presented by Mehemet Ali (1837). The Egyptians dedicated obelisks to Tho Egyptians dedicated obelisks to sun deities, and worshipped them. Consult Zoega, De Origine et Usu Obeliscorum, 1797; H. H. Goeringe, Egyptian Obelisks, 1882; and Parker, The Treelve Egyptian Obelisks (at Rome), 1879.

Oberalp Pass, a mountain pass in Switzelland over the Alps, on the

the day of the latter's calamity, when Oberalp Pass, a mountain pass in Jerusalem was captured and lots cast Switzerland over the Alps, on the

Grisons. It attains a height of about 6730 ft, and it connects Andermatt, above Goescheneu, with the valley of the Vorder Rhine to Disentis. It forms with the Furka the chief carriage route for tourists from the Simplon and Zermatt to the Engadine.

Ober-Ammergau, a vil. on the r. b. of the Ammer in Upper Bavaria, situated 44 m. S.W. of Munich. It has some 1400 inhabitants, who are engaged mostly in wood and stone carving. At this village a famous passion play is performed every ten years in fulfilment of a yow which was made in 1634 when the village was visited by a sovere plague. This play now draws visitors from all parts. See Miracle Plays, Passion Plays.

Oberhausen: 1. A tn. of Prussia in the Rhine Province, on the Emscher, 7 m. W.N.W. of Essen. There are There are important coal mines and iron works. zinc smelting works, rolling mills, and manufs, of chemicals, glass, and por-celaiu. Pop. 89,897. 2. A market tn. of Bavaria, in Swahla, on the Wertach. It is a northern suburh of Augsburg.

Oberlahnstein, an old tn. of Prussia, in the prov. of Hesse-Nassau, on the Lahn and Rhine, 4 m. S.S.E. of Coblenz. Parts of the ancient walls are still standing, and there is a eastle which was formerly used as the resideuce of the electors of Mainz. Thero are lead and sliver mines in the vicinity. Pop. 8925.

Oberland, see BERN.

Oberleutensdorf, a tn. of Bohemia, Austria, 10 m. S.W. of Teplitz. There are manufs, of textlle goods, etc., and in the vicinity are many coul mines.

Pop. 10,658.

Oberlin, a tn. of Ohio, U.S.A., iu brain co., 30 m. S.W. hy W. of Lorain eo., 30 m. S.W. ny W. C. Cleveland. Its college was founded in 1833, and students of either sex or any nationality are admitted. Pop.

(1910) 4365.

Oberlin, Jeremiah James (1735-1806), an Alsatlan philologist and antiquarian, born at Strasburg. In 1770 ho was appointed professor of rhetoric at the university of Strashurg, and in 1782 professor of logic and metaphysics. Ho travelled and metaphysics. Ho travelled through the different provinces of branea to investigate the provinces of France to investigate and study antipublished remains, and quarian several manuals on archeology and ancient geography. His chief works ance Dissertations sur les Minnesingers, Essai sur le Palois Lorrain, and Observations concernant le Palois et les Mœurs des Gens de la Campagne.

Oberlin, Johann Friedrich (1740-1826), an Alsatian ecclesiastic and philanthropist, born at Strasburg. In

borders of the cantons of Uri and in the Steinthal (Ban-dea-Rochel), and became known for his efforts in furthering education and morals in that district. He was also the founder of the first infant schools, and in-terested himself in agriculture and industry. A collection of his writings was published in 1843. See Lives by by Butler (1882) and Stein (1899).

Oberon (Fr. Alberon or Auberon, and Ger. Alberich, rich elf), the king of the elves. In this country ho is best known for the delightful part he plays with Titania, his wife, in Shake-speare's Midsummer Night's Dream-There is really no resemblance bo-tween this haughty little fairy and the ugly dwarf, Alberich, who steals the Rlune treasure in Wagner's Ring. O. is first called the 'roi du royaume de la fécrio in the 13th century metrical romance, Huon de Bordeaux His name is the title of a masque of Ben Jonson (1616), an epie of Wieland (1780), and au opera of Weber (1826).

Oberschöneweide, a vil. of Prussia, In the Wahl Heide dist., of which it forms a resideutial suburb. It stands on the R. Spree, about 5 m. S.E. of Berliu.

Oberstein, a tu. of Oldenburg, Germany, on the Nahe, 32 m. S.W. by W. of Bingen. It is the principal seat of the agate-polishing industry. There are ruins of two eastles. Pop. 9669.
Obertyn, a tn. of Gallela, Austria, 46 m. N.W. by W. of Czernowitz. There

Pop. 5759.

Obesity, an abnormal excess of fat, almost amounting to a disease. cumulating principally in the thighs, abdomen, and neck. The accumulation of fat depends to a large degree on the health, but in a diseased state of the system the production and deposition of fat is increased. In many eases O. hears no proportion to the food taken, though it is occasionally the result of food being excessive in quantities of certain constituents relative to the exidising powers of the consumer. It may occur at any period of life, but more commonly prevails after the fortieth year. The predisposing causes are sedentary occupations, inactivity, too rich dict, etc. It ls frequent lu certain diseases such as anæmia, and in some forms of insanity. Many systems have been recommended for the amelloration of this complaint, but treatment should be suited to Individual cases. The main point to be considered is the careful supervision of dlet and exerclse, and the steady aim should be the gradual loss of a few onnees during the week. All rapid reduction of fat should be avoided, as it is injurious to the system in other ways. 1767 ho became a Protestant paster Banting system for the reduction of

known and the most followed, consisting largely of the avoidance in diet of fat, sugar, and starches.

Obi River, see OB.

Object, see Subject.
Obiter Dictum (Lat. 'said by the way'), an expression used specially to denote those judicial utterances and decisions in the course of delivering a judgment which, taken by themselves, were not strictly necessary for bound) was placed in much the same the decision of the particular issues raised. In the language of jurisprudence an O. D. is of 'persuasive 'and was equally bound to render some-not 'authoritative' efficacy, when thing according to law. The Roman

cited by a counse argument. Maine that the ancient Ro

in the days when they were called upon to give responses or legal de-·eisions on cases submitted to them, were in no way bound by the special facts of the case, but could multiply the data at pleasure, and so evolve a general rule from facts both real and imaginary. In other words, the formulation of legal principles was of greater importance than the mero settlement of the client's difficulties. But in the English courts of to-day one of the best reasons that can be urged by counsel to prevail upon the hardly be said that when the law of bench to ignore a proposition contained in the law reports, is to show that it was not necessary to decide the matter in hand.

Oblate, a geometrical term applied to a spheroid produced by the revolution of an ellipseabout its shorter axis.

Oblates, in the Roman Catholic Church, congregations of men and women under simple vows. The best known congregation is that founded by Charles Borromeo, Archbishop of Milan, in 1578, and now known as the Oblates of St. Charles. They form a community of priests who put them-selves in the hands of the bishop to be used where and how he wishes.

Obligation, a term used in jurisprudence (q.v.) to denote the hinding force of a legal contract (q.v.). example, Savigny defines a contract as ' the union of several in an accordant expression of will with the object of creating an obligation between them.' In other words, O. connotes but does not denote contract, and that, whether we adopt Savigny's subjective standard or Professor Holland's view of the essential feature of a contract as an objective act in-dicativo of agreement. The Indicative of agreement. The Institutes of Justinian define O. as a 'tie of law by which we are so constrained that of necessity we must render something according to the laws of our state, a definition which, by its generality, avoids the practical difficulties (especially in the class of of ebony, silver, or boxwood, and has

undue corpulence is perhaps the best; contracts that were said to be created by mere consent, e.g. sale, partnership) in the way or any attempt to distinguish between a real or apparent With the consent between two wills. Roman lawyers an O. could have its source in delict (tort or actionable wrong), as well as in contract. other words, the source of Os. was immaterial, and if a state of facts arose by which the debitor (person position in which he would have been if ho had entered into a contract, ho

A nude pact gives riso to no, but might be the basis of ion,' meant that there were

some agreements not falling under the recognised heads of contract, which were not enforceable, but were available as defences. Some nudo pacts were, however, actionable, e.g. the pactum constitutæ pecuniæ, or agreement to pay what one already owed. 'Natural Os.' were those which, devoid of a recognised legal force, had at least some moral claim to recognition, e.g. an agreement between a paterfamilias and any one in his power, like a son or slave. It need contract of any country has reached the point of substituting for symbolical ceremonial mere consent as the fact that 'draws with it the obligation,' it has reached its highest ethical conception, though evidential difficulties may arise in any particular case whenever it becomes necessary to say whether consent was freely and voluntarily given.

Obligation, Days of, in the Roman Catholic Church, days on which abstinence from servile labour attendance at mass are commanded. They are (for England and Wales) tho Circumeision, Epiphany, Ascension, SS. Peter and Paul, Assumption, All Saints, Christmas Day. For Scotland, St. Andrew's Day must be added, and for Ireland that of St. Patrick.

Oblique means declining from the vertical or horizontal direction, that is, inclined at any angle other than a right angle. The obliquity of the right angle. ecliptic is the inclination of its plane to that of the equator.

Obock, or Obok, a Freuch colony of E. Africa, on the Gulf of Aden, forming part of French Somaliland. It has a small safe harbour, which is easy of access. O. was ceded to France in 1862. The seaport has been superseded by Jibuti. Pop. 22,500.

Oboe, or Hautboy (Fr. hautbois), a trehle reed wood-wind instrument, provided with a double reed mouthpiece and a conical bore. It is made pass is from Bb below the stave to F in alt, and includes all the semitones; the music is written in the Gelef. The O. is popular in orchestras because of its exceptional technical officiency and because of its rich, if somewhat penetrating, and varied tones. In the middle ages it was called 'schalmey' (Eng. 'shawm'). Bach was fond of the 'hauthois d'amour,' now almost obsolete.

Obelns (Gk. δβολός 'a spit'), the smallest Greek coin and also the smallest Greek weight in common use. As a coin it was always equivalent to one-sixth part of a drachma, and was therefore worth about 1.625d., though the amount varied. As a weight it was again equal to one-sixth of a drachma, that is, to about 16 grains, although it fell to as low as 8.6 grains

during the later Roman empire. O'Brien, James Francis Xavier (1828-1905), an Irish politician. took part as assistant-surgeon in tho American Civil War (1861) and afterwards became manager of a wine and tea business in Cork. At the instance of James Stephens he became a Fenian, and spent two years in prison (1867-69), having been sentenced to penal servitudo for lifo because he led the assault on the Ballynoekan police barracks. From 1885 till his death he sat as a Nationalist in parliament and was for many years general secretary to the United Irish League of Great Britain.

O'Brien, Lucius Riehard (b. 1832), a Canadian painter, born at Ottawa. Ho was the first president of the Royal Canadian Academy of Arts, and held that honourable position for ten successive years (1880-90). Per-haps the most impressive of his pic-tures is 'Sunriso on the Saguenay at Ottawa.' He illustrated Picturesque

Canada, 1881.

O'Brien, William (b. 1852), an Irish journalist and patriot, leader of tho 'All for Ireland' party. Ho began life as a journalist, and after serving as reporter to the Cork Daily Herald (1869-75) and contributing to the Freeman's Journal (1875-80), he established United Ireland in 1880, and edited it with a view to popularising the aims of Parnell and the Land League. Much later in his career, in 1898, that is, he founded The Irish People, to give publicity to the objects and work of the United 1rish League, in the formation of which he was again prime mover. Other products of his literary netivities are When we were Boys, 1890; Irish Ideas, of the Emperor Augustus. Practically Recollections, 1906; and 1894: Olive Branch in Ircland and its History

fifteen keys, exclusive of two octave lory, 1910. His parliamentary career keys, which assist the production of dates from 1883, when he was rethe higher notes. The normal computer as a Nationalist by his native city of Cork. Since that time he has kept his seat, except during the years 1895 to 1900, when he retired in consequence of the dissensions rife in the Irish party. At first an eager sup-porter of Parnell, he later veered round to the opposite side, hut ever since he sat on the Land Commission of 1903, which in some measure solved the vexed land problem, he has thrown the whole weight of his influence into the scale of the conciliation policy, which looks with confidence towards the nnion of Irishmen of all creeds and classes. There have been stormy periods in his career as, for instance, when he suffered continual imprisonments minder the Crimes Act in councetion with the National League and the Tenants' Defence League, etc. (1887-91), and again in 1890, when he was obliged to flee to America with Mr. Dillon in order to escape a politicai chargo at Tipperary. Mr. O'B.'s faction came into serious collision with the Nationalists at Cork in 1910: as early as 1905 lt was suggested at a meeting of the United Irish League that Mr. Dillon and Mr. Redmond, on tho one hand, and Mr. O'B. on the other, should confer with a view to composing amlcahly their differences.

O'Brien, William Smith (1803-61), an Irish patriot, horn at Dromoland, eo. Clare. From 1828-31, and again from 1835-48, he sat in the imperial parilament, and though a Protestant spoke in favour of Catholle emuncipation. In despair of securing justice for his country from Westminster, he joined O'Connell's Repeal Association, but in 1816 seceded therefrom, and became leader of the 'Young Ireland 'party, who had no scruples about the use of physical force. The result was that in 1818 he was sentenced to death for his leadership of a rising which had ended in hopeless failure. The sentence, however, was

commuted, and in 1851 O'B. regained his liberty.

Obscene Prints and Publications, sec INDECENCY.

Obsourantists (Lat. obscurare), a term applied at the time of the revival of learning to those who were opposed to all new views, irrespectivo of their origin, by reason of reli-gious prejudice. The word 'obscur-antism' is derived from Germany.

Obsequens, Julius, a Roman writer, and anthor of a work entitled De Prodigits, recording the history of Rome from its foundation to the time An nothing is known of his personal

Observantists, sec FRANCISCANS. Observatory, an institution for the scientific observation, by means of suitable and highly specialised instruents, of natural phenomena, the conditions of which cannot be controlled by the scientist. classed as astronomical, They are They are magnetic, moteorological, and seismic and volcanio. Astronomical Os. date from very ancient times, if we include obelisks, pyramids, and stone circles, which were undoubtedly so used, but the O. at Alexandria, founded 3rd century B.C., and associated with the name of Hipparchus and Ptolemy, is usually considered the first. During the Dark Ages many were founded in Mohammedan lands and earried on important work. The first European O, was that erected by Walther at Nuremberg (1472), associated with tho uamo of Regio Montanus; theu came Cassel (1561-97), erected by the Land-grave William IV., and Hven, Den-mark (1576-97), where Tycho Brahe inaugurated the methods sineo fol-lowed and extended. These were not merely evidences of the revival of learning, but followed on the demands of extended navigation in the latter half of the 15th century: was the needs of the art of navigation (q.v.) which gave riso to the founding (4.0.) which gave riso to the founding of Os. at Paris (1667) and Greenwich (1675) (see Nautical Almanac). Helvelius worked in his private O. at Danzig during the 17th contury. The Greenwich O. commenced magnitudes. netic and meteorological work in 1838, neticand meteorological work in 1938, and special solar photographs since 1873. It is a royal O., presided over by an astronomer-royal, as also are the Os. at Blackford Hill, Edinburgh (1896, but founded 1818 at Calton Hill); Dunsink O. (1785), belonging to the University of Dublin; and that Care Town (1890). Other instituat Cape Town (1829). Other institu-tions in the British Is. include the Radcliffe O. (1771) and the Univer-sity O. (1875), the latter under the Sayillan professor of activation. Savilian professor of astronomy, both at Oxford; Cambridge University O. at Oxford; Cambridge University O. (1820); Glasgow (1840); the Earl of Rosse's, Birr Castle, Ircland (1839); Dr. W. Huggins', Upper Tulse Hill, London (1856), famous for his spectroscopio work; Earl of Crawford's, Dun Echt, Aberdeenshire (1872); Rugby School, and Stonyhurst College. The Herschels' O. at Slough (1736); and Gromphyldge's Black. (1786), and Groombridge's, Black-(1806), are discontinued. There are now very many private Os.

seilles, Nice, and other places. In Germany, Kiel Royal O., removed from Altona (1872), contains the offices of the Astron. Nachriohten; Berlin Royal O., where the Jahrbuch is edited; Bonn; Bothkamp, where Dr. Vogel did his spectroscopic work (1871-74); Gotha; Göttingen, associated with Bessel; Leipzig; Munich, etc., with many others, in-cluding Potsdam (1874), devoted to astrophysics. Austria-Hungary has Os. at Vienna, Prague, Pola, Budapest, O'Gyalla, etc.; Italy at Milian, Rome, Naples, Palermo, etc., and Mt. Etna (9650 ft.); in Russia at Pulkowa, Dorpat, etc.; other European Os. include Copenhagen, Leyden and Brussels, Helsingfors and Abo. modern toudency has been towards specialisation, but combined international work, especially in star oataloguing, is carried on. Astrophysics has claimed more and more attenhas claimed more and more attention, and Meudon, Paris, Potsdam, and Königstuhl are engaged mainly in that work. In America, the Yerkes O. at Williams Bay, Wis. (1897), is the finest; with it is associated Mt. Wilson, California (5900 ft.); the famous Lick O. (1879), Mt. Hamilton, California, is at about 1250. Hamiiton, California, is at about 4250 ft., and was completed in 1888; Harvard College O. at Cambridge, Mass. (1839), is associated with Pro-fessor Pickering, who has an outpost at Arequipa specially devoted to astrophysics; others include the astrophysics; others include the Alleghany (1860); Cincinnati (1842); Yale; Leander McCormick, Virginia; Plower, Penn.; Naval O., Washington (1845); Flagstaff, Arizona, 7900 ft. (1894), associated with Professor Loweli. S. America has institutions at Cordova (1871), Rio de Janeiro (1871), Valparaiso, Monte Video, Buenos Ayres. It should be noted that most years see expeditions fitted that most years see expeditions fitted out by various Os. and governments for the better observation of eclipses, transits, etc., in suitable spots. netic.—The chief British O. at Kew has been removed to Bushey. Particular attention is generally given to this branch of observation in the naval Os. of the various countries, but the most important work of recent years has been that of temporary Os. in connection with Arctio and Antarctic explorations, particularly Cap-tain Scott's expeditions to Antarctica, when determinations of the S. magnetio pole were made. Meteorological.—In Britain, that at Kew is the throughout the world, the chief work headquarters, and all instruments being carried out with one or two good instruments. British Os. also include those at St. Helena, Durban, Oxford, Falmouth, Stonyhurst, Glas-Melbourne, Sydney, and Adelaide. In France there are Os. in Paris, servations are carried out by meanwhere Cassini worlded Mandon Mer. of self-recording instruments as well. where Cassini worked, Meudon, Mar- of self-recording instruments as well

duences of weather. Altogether there are some thirty observing stations in the British Islands, and further information is gathered from forty stations in Iceland and the Färoes, Scandinavia, Central Europe, France, Spain, and Portugal, and also from ships out in the Atlantic by wireless telegraphy. Among important Os. arc: Mt. Washington, New Hampshire (6280 ft.); Pike's Peak, Colorado (14,134 ft.); El Misti (19,000 ft.); Peru, the Harvard College insti-tution; Blue Hill, Bostou; and tem-porary Os. havo been established on Mt. Blano (14,400 ft.) by MM. Vallot and Janssen; Puy de Dome; Mt. Ætna; the Rigi; Sonnblick; Wendel-stein, etc. Mcleorological observation has also formed one of the chief duties of Arctic and Antarctic ex-peditions. Seismic (see Seismopeditions. Seismic (see SEISMO-GRAPH).—Much work has been done with this instrument for recording carthquakes and earth tremors. Professor Milno kept regular observations at Shide in the I. of Wight; there is an instrument at Birmingham. Japan has nearly 1000 observing stations, and others are scattered all over the gloke. Vesuvius has an O. glass. It is generally black, but may been no cc-ordinated work except that do to the private enterprise of Professor Milne. For Instruments, see ASTRONOMY, "Some and others are scattered all position, resembling common bottle-glass. It is generally black, but may been no cc-ordinated work except that low specific gravity because they are due to the private enterprise of Professor Milne. For Instruments, see ASTRONOMY, "Some a concludal fracture ASTRONOMY LOGY. Sec als cal Journal, 1

the Royo

Mr. Doxat, who actually continued in that capacity for half a ceutury. It was a comparatively obscure publication until William Inuil Clement purchased a share in it some twenty years later. Clement, who subsequently bought the one-time flourishing Morning Chronicle from the famous James Perry in 1821, and the sporting paper, Bell's Life in London, soon organised the O. into the foremost paper of the Sunday press. But though still a leading Sunday paper the O. of to-day is a radically different publication from what it was in its earliest days, for it once relled for its earliest days, for it once relied for its mour was looked upon a success largely on its illustratious, and The transference of the unidwife's understated journalism in England a great deal to the rediscovery of would be complete without some reference to the spade work of Clement in that respect. Perhaps he consists of manipulating thu founs in was too energetle in the matter of thu uterus so as to bring the feet to

as by regular eye observations, and illustrating events or producing por-include all possible controlling in-traits of persons of all-absorbing fluences of weather. Altogether there public interest in days when it was none too safe to report either murder trials or events connected with politries. For publishing a report of Thistlewood's trial in 1820 he incurred a penalty of £500, which, however, was not enforced. The coronation pictures of the O. proved an enormous success, and secured for the proprietor what then amounted National Biography). Up to the time prior to Gladstone's Home Rule proposals the policy of the O. was Liberal, but thereafter it hecame Unionist. Its price in 1887 was 4d., but before the 19th century was out it had gone de published at 1 only Sunday

devoted to recent years for the penchant of over-florid Protectionist articles of Mr. Louis Garvin, who in 1913 began writing for the Pall Mall Gazette.

Obsidian, a dark-coloured vitreous chame a

a concholdal fracture hat of glass, and yields fragments largely omprimitive races for spear-

vol. xxxiv.; Symonus, size of the Journal; and publications of the Metcorological Office, London. Observer, one of the oldest London Sunday papers in existence; established in 1791 under the editorship of Mr. Doxat, who actually continued Romans, and at the present time it is Romans, and at the present time it is somotimes cut and polished as an ornamental stone.

Obstetrics (Lat. obstetrix, midwife; from obstare, to stand before), that part of the seiguee of medicine which deals with the care of women in respect of child-birth. It is therefore a division of gynacology, which deals with diseases of women, especially with those affecting the organs of reproduction. Midwifery was in the hands of women until about the 16th century; indeed, the interference of a physician in the process of childlabour was looked upun as immoral. The transference of the unldwife's

the outlet; by this means children were safely delivered who could not otherwise have been horn. Other notable developments have been the invention of the forceps by the Chamberlens, Huguenot refugees settled in London; the administration of anesthetics initiated by Sir J. Y. Simpson in 1847; and the diminution in cases of puerperal infection by the use of antisepties. Modern obstetricians are concerned with the process of parturition and the varying conditions met with, the employment of operative or instrumental measures if occasion calls for them, the care of the woman during the puerperium, or period dur-ing which the uterus is regaining its normal size, and the supervision of the new-horn child's welfare during that period.

Obvaiden, see Unterwalden.
Ocampo, Florian de (1499-1555), a
Spanish historian, born at Zamora,
in Leon. He is remembered for his
Cronica general de España, published
at his native place in 1541. This work
began at the Delugo, but was only
carried by O as for as the second carried by O. as far as the second Punio War, heing completed by Morales.

Ocaña: 1. A tn. of Spain in the prov. of Toledo, 7 m. S.S.E. of Aranjuez. Pop. 7000. 2. A tn. of Colombia, 220 m. S.E. of Cartagena. Pop. 6000. Ocarina, a musical toy wind instrument of terra-cotta, in shape resembling a goose's (It. oca) egg. It was introduced into England by tra-

was introduced into England by travelling German or Tyrolese musicians, and sounds somewhat like a dageolet. There are usually eight or teu finger holes, a whistle-like mout b-piece, and a large internal cavity. Modernius truments have a row of keys. The Chinese 'hsuan' (c. 3000 B.C.) was

perhaps its ancient prototype.
O'Carolan, Torloch, or Carolan,
Turlogb (1670-1738), an Irish bard;
became blind after an attack of smallpox in 1684, and this calamity probably accounts for his profession. Patrons furnished him with a servant and horses, and he wandered with his harp through Connaught. O. composed his own songs and melodics, and was much in request both by

rich and poor.

Occam, William, see OCKHAM.
Occleve, Thomas, see HOCCLEVE.
Occlusion, a shutting up; the closing together of the masticating surfaces of the upper and lower teetb; the absorption of a gas by a metal. Many solids are capable of occluding gases when in a molten state, and the gas so occluded is usually emitted on

in a finely-divided state. Platinum black, for instance, takes up 100 times its volume of oxygen, and 110 times its volume of hydrogen; palladium absorbs over 600 times its volume of hydrogen; iron, cobalt, nickel, copper, silver, and gold exhibit the phenomenon of occlusion in a less degree. The intimate contact of these gases when occluded leads to chemical combination, in which great heat is evolved. Thus a jet of hydrogen or coal-gas directed against plathnum black causes the metal to glow, and the jet is speedily ignited. The large proportion of hydrogen occluded hy palladium led to the supposition that a definite compound publishing compound, palladium definite hydride, Pd.H., had heen formed, hut recent chemical opinion does not favour the suggestion.

Occultation usually refers to the eoncealment of a star by tho moon, which, hy its eastward motion, eclipses the star. The star disappears behind the eastern limb and reappears at the western. In the first half of the luna-tion, the E. limb being dark and the star a mere point, the O. is sudden. forming a most accurate means of determining the moon's position, and thus its perturbations; the Greenwich time being known, the longitude of a

i

pressed pole, with a radius equal to the depression: the circle of perpetual apparation being equal and opposite.

Ocean, a first-class British battle-

ship, launched in 1908, with a displacement of 12,950 tons and a speed

of 18 knots.

Ocean and Oceanography. The ocean is the mass of continuous water covering 72 per cent. or nearly threefourths of the earth's surface; parti-ally enclosed or shallow areas are sometimes known as seas. The area has been computed at 142,000,000 sq. m.; average depth, 11,500 ft. (some 21 m.); volume, 300,000,000 cuh. m.

Distribution. - In the northern henisphere the proportion of land to water is 2:3; in the southern, 1:47. There is a 'land hemisphere,' however, in which they are nearly equally distributed, and a water hemisphere

in which the times that of

side of lat. 6 ous belt of c..

arctica from which the great oceans solidification. Certain metals, notably extend northwards; the Indian the platinum metals, have the property of absorbing gazeswithoutbeing yond the equator, terminated hy fused, especially when the metal is the S. mountain masses of Asia; the Atlantic is a great S curve to ment of planetary winds, a firm stathe Arctic Circle where the Arctic Dility which nevertheless allows a Ocean forms an embayed end, occupying a polar 'cap' of radius terrestrial winds.

20°; the Pacific, a roughly circular Temperature.—The surface temperature. Ocean forms an embayed cnd, oc-cupying a polar 'cap' of radius 20°; the Pacific, a roughly circular area some 170° in breadth at the equator and terminating at the Arctic cricic. The forms of the ocean areas roughly agree with the tetrahedral theory (see MOUNTAINS). Certain features of the oceans have had vast influcuce, specialising climate, habitability, and character of population in certain regions; e.g. the continuity of the Atlantic and Aretic with its N.E. trend may be considered the main factor in European supremacy and progress; the termination of the Indian Ocean some 20° N. of the equator is responsible largely for the mon-

aturo varies from over 80° F. (annual average) within the tropics to freezing point towards the poles. There is a rapid decrease of the temperature downwards to some 400 fathoms, with a further slow decrease down to abysmal depths, when it shows 30° in higher latitudes and 35° to 40° in the torrid zone. Sea water freezes at about 28° F., so the occan may be said to be cold in general. Bottom temperatures show a quite different condition in enclosed seas such as the Mediterranean. The specific heat of sca water is less than that of fresh water, but soon climate and peoples of the Far still high, being 0.93 for a density of

WATER HEMISPHERE

LAND HEMISPHERE





FIG. 1

East; the marginal seas of the 1027; it therefore warms and coels Atlantic, in the N. hemisphere, the slowly, and this is the great basis of N. Pacific termination, the break in its tempering influence; one volume continuity in Control. continuity in Central America, the of the occanic water can raise the projection of Brazil i of 3100 vols. of air or are other features of

rivers into the Atlantic or Arctic, the Indian getting a remarker, con-Pacific a particularly narrow, con-tributing land margin. (For further as occanic climate. Composition.—Occanic water con-Indian getting a relatively,

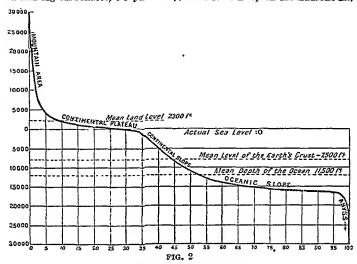
ATLANTIC, etc.)
Importance.—The great influence of the oceanic body of water is that of moderating, tempering, and regulating the climatic conditions of the earth: it is the great store of the liquid hydrosphere, and its reactions with the sun's heat delicately counterpoise those of the land and air; its movements are complex, yet each has its Mediterranean and Red Sea, are vast significance; its great extent and heaviest. The salts dissolved are even surface favours the develop-Isufficient to form a crust 170 ft. thick

no amount in attaining importance. Again, large of long pared with land the ocean remains cool in summer and warm in winter, and its effect on the atmosphere is

> tains nearly 200 times the dissolved salts of fresh water; 100 lbs. contain 3.5, i.e. the salinity is 3.5. The surface shows a salinity varying roughly 3 to 1, regions of heavy rainfall, slight evaporation, or large ingress of fresh water being less salt. Regions of the trade winds and calms show heavy salinity, but the enclosed seas, the

The over the surface of the ocean. over the surface of the occasion in comparison with land elevation in comparison with land elevation in is: Sodium ohloride, 77.7 per cent.; Fig. 2, where Wagner's estimates of is: Sodium ohloride, 77.7 per cent.; Fig. 2, where Wagner's estimates of magnesium sulphate, 4.7 per cent.; are shown (lower figures) for heights calcium sulphate, 3.6 per cent.; (left hand figures) above and below potassium sulphate, 2.5 per cent.; sea-level. The greatest depth sounded Ca and Mg carbonates, 0.3 per cent.; is the Nero Deep off the Ladrone Is.,

Tho Depth of the ocean is best shown



Mg bromide, 0.2 per cent; other salts, 5269 fathoms. 0.2 per cent. This shows the great deepest ocean predominance of the chlorides, river water having a predominance of car-bonates (57.72). The composition is practically constant except at great dopths where more calcium or mag-nesium carbonate is found. The terrigenous blue muds show a higher percentage of chlorides.

The Pacific is the deepest ocean on the average, the Atlantic and Indian following in order (see PACIFIC, etc.). The bed of the ocean has a gently undulating surface with depressions, rises, ridges, and plateaus, the margins forming what is known as the continental shelf, a sill of very varying breadth, but of very great influence on the

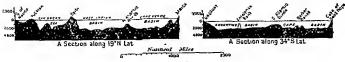


FIG. 3

somewhat with depth.

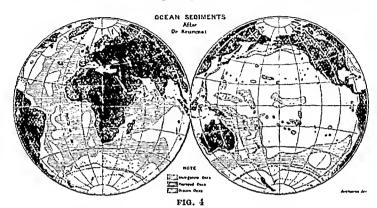
Pressure .-- Professor Tait est an increase of 1 ton per sq. in.
in depth; that in the lowest
being 4 tons per sq. in. If these as follows: Littoral, between high
pressures were relieved, the level of and low water marks, sands, gravels,
muds, etc. Shallow water, less than

Density.—This varies on the surface tides. Fig. 3 shows a typical section from below 1.025 to above 1.023, of ocean much exaggerated vertivarying with the salinity. It increases somewhat with depth.

ir temperatures. been the subject

If these as follows: Littoral, between high muds, etc. Shallow water, less than

100 fathoms, the same. Continental rises theso are Diatom coze, and or Hemipelagic: Blue mud, dark and Globigerina and Pteropod coze reslaty in colour, due to decomposition spectively (Fig. 4). In the abysses of vegetation, the reduction of sulphates to sulphides, and the formation deepest parts, red clay (Fig. 5); the of ferrous oxide and ferrous sulphide latter formed of the relies of siliceous



from the ferrio oxide. Shell remains and calcareous shells, pumice stone, do not form a large percentage. Red desert and volcanic dust, and meteoric mud, where the iron predominates dust. over vegetation remains. Green mud, where rivers contribute less largely, of the ocean are due mainly to preduce to chemical action of sea water on vailing winds. Fig. 6 shows these, and the particles of rock derived from the it will be noticed in each hemisphere

OCEAN SEDIMENTS After De Krymm FIG. 5

land, forming the green mineral great swirls are formed by the agency glauconite. Volcanie and coral muds of the trades and westerlies, centred and sands, occurring in the regions of near Cancer and Capricorn: their or Deep Sea: These are occess due to clock in the S. hemisphere. These siliceous and calcarcous organisms, induce minor counter-currents along mostly microscopic. Over ridges and the equator. In the Atlantic and

Pacific feeders of warm water run off | waters, in regions of low pressure, due to the N., and cold currents descend from the Arctic. A similar arrangement is obliterated in the S. hemisphere by the belt current due to the Roaring Forties. In the N. Indian Ocean the currents change with the monsoons. The influence of these currents together with the winds above them is the determinant of climate for oceanic land margins; a marked effect being that in the latitudes of the great swirls, the W. margins of the ocean, i.e. the E. continental regions, are warm, wet, and humid, the E. margins of the ocean tending to desert conditions; the warm and cold branches produce such contrasts in climate of the same

to inblowing winds; but atmospheric pressure alone as a cause, without wind that is, is known in the case of Sciches (q.v.).

Sea-level. The 'level' is disturbed by high evaporation, rainfall, inflow of large rivers, the melting of icc, heaping by prevailing winds, the set of tidal streams, etc., but also to the gravitational attraction of large masses of land. The careful survey of India has shown a rise of level of 300 ft. from Ceylon to the head of the Arabian Sca, accounted for by the proximity of the great mountain masses of the Pamirs and Himalayas.

(For life in the ocean, see BOTANY,

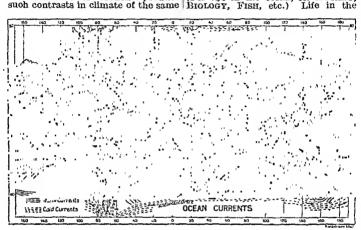


FIG. 6

swirls are large areas of practically still water covered with the mass of living floating seawceds known as sargassum. In addition to the surface sargasamin. In addition to thousantace circulation (see further, ATLANTIC, PACIFIC, etc.) there are complicated horizontal currents very little known at present, and a definite 'crcep' of cold water from the Polar regions to the equator, which is found at depths below 2500 ft. More or less vertical currents, naturally slow, are set up by the 'welling up' of this water at the equator, compensated by downward movements in the tropics due to increased density. The whole question of these currents must await greater knowledge of their distribution. atmospheric pressure. The effect of

latitudes as are shown in the case of occan is possible mainly because of Europe and Labrador. Within the the absorption of oxygen by sea water, to the extent of about 8 c.o. per litre, but this diminishes with increase of temperature. That this dissolved oxygen is found in all sea water even from the depths is due to vertical circulation over extended regions; in enclosed seas, e.g. Black Sea, it is not present at the bottom. Scientific exploration commenced

with the laying of submarine cables, about 1855. Athanasius Kircher had in 1664 attempted a map of ocean currents, but before that interest lay in the wind circulation. H. B. de Sassure made observations of temperatures at great depths in 1780. Major Rennell attempted a scientific account of the currents between 1742 and Schott has adduced the influence of 1830, while Arctic exploration added to the general knowledge. Sir John this is seen in the heaping up of Ross examined the oceanic doposits,

made observations of temperature with a self-registering sheathed thermoineter. M. F. Maury of the American navy published his *Physical Geography of the Sea* in 1856, which was the result of investigations organised under the U.S. Hydrographic Office, and led to the similar research since systematically carried on by the navies and marine services of many countries. In England, Professor Forbes and Dr. Carpenter during the last century gave a start to marine biology, and the British Government sent ships into the N. Atlantic to carry on the work. The voyage of H.M.S. Challenger (q.v.), 1872-76, an expedition sent out by the British Government for complete investigation of the ocean, icd to a systematic scheme of occanography, and to great improvement in instruments and methods. Other expeditions have been: Vöringen, Norwegian, in the N. Atlantic, 1876-78; Talisman and Travailleur, French, Bay of Biscay, 1880-83; Vilyaz, Russian, Pacific Ocean, 1886-89; Pola, Austro-Hungarium, Mediterranean and Red Seas, 1890-98; Fram, Norwegian, drift in the Arctic Sea, 1893-96; Ingolf, Danish, 1896; Blake and Albatross, U.S. Fisi Commission, Atlantic, Caribbean, and Pacfie, 1877-1901; Princess Alice, Prince of Monaco, N. Atluntic, since 1885; Valdivia, German, Atlantic, Indian, and Southern occurs, 1898-99; Sibopa, Dutch, Malay Archipelago, scheme of occanography, and to great Siboja, Dutch, Malay Archipelago, 1900; the Belgica, Gauss, Antarctic, Scotia, Fram, Discovery, Terra Nova, Nimrod, Pourquoi Pas, Antarctio voyages during the present century. These latter have added immensely to the science of marine biology, and the conditions existing in the southern ocean, the great beit where all the oceans communicate. Permanence of ocean basins .-- Much

discussion has arisen us to the primayal permanence of the deep ocean areas, as roughly marked out by the blue mud. The absence of geotogical representatives on land of the deep sea oozes led to theories of permanence, particularly clucidated by Dr. A. R. Wallace and Lord Kelvhi. Jukes-Brown and Professor Harrison established the geological evidence for

and showed the existence of deep have been very differently distributed ocean life. In 1857 H.M.S. Cyclops in pastages. See Wallace, Island Life, have been very differently distributed in past ages. See Wallace, Island Life, IS80: Professor E. Haug, Traife de Géologic, 1907-11; Professor Frech, Lethœa geognostica, 1876-1910 (in progress), for maps; W. C. Thomson and J. Murray, Report on the Scientific Results of II. Al. S. Challenger, 1882-95, and Summary of Scientific Results, 1897; A Refrospect of Oceanography, Report of VI. Inter. Geog. Congress, London, 1895; F. Nansen, Scientific Results of North Pole Expedition, 1902; K. Karstens, Eine Neue Berechnung der Karstens, Eine Neue Berechnung der mittelerung Trefen der Ocean, 1894: Boguslawski and Krümmel, Handbogustawski and Krimmei, Mana-buch der Oceanographie; Wagner, Geo-graphisches Jahrbuch, since 1888; Krümmei, Der Ocean, 1902; J. Thoule, Guide de l'Océanographie pratique, 1895; Walther, Allgemeine Mecres-kunde, 1893. Publications of Meteoro-logical Office, London; U.S. Hydro-graphic Department; Doutsche Lee-warte. Reports of expeditions: Porwarte. Reports of expeditions: Porcupine and Lightning, London, 1873; Vöringen, Christiania, 1880-1900: Travailleur and Talisman, Paris, 1891 et seq.; Princo of Monaco's expeditions, Monaco, 1889 et seq.; Ingolf, Copenhagen, 1900 et seq.; Polo, Vienna, 1891 et seq.; Valdivia, Berlin. 1900 et seq.; Fram, Christiania and London, 1900 et seq. The Ocean by Sir John Murray (1913; Home University Library) is a popular summary. See also Tides, Waves, Winds, River, Hydrometer, Sounding, Nationation, etc. SOUNDING, NAVIOATION, etc.

Ocean Grove, a summer and senside resort, 55 m. S. of New York City by rail, in Monmouth co., New Jersey, U.S.A. It is noted for its Mothodist

camp meetings, and also for its concerts. Pop. (1910) 1377.

Oceania, a general term for the islands of the Pacific Ocean, comprising all those intervening between the south-eastern shores of Asia and the western shores of America. divided into three great sections, viz. the Maluy Archipelago, Australasia, and Polynesia, and roughly covers an area of about 60,000 sq. m., excluding Australia and New Zealand, scattered over a wide expanse of oceau. Most of the islands are coral atells, though some are of volcanie origiu.

Ocean Steamship Company, Ltd., the successor, under the same manage-Borneo, and some S. Pacific islands. first dates from 1852. In 1863 this The distribution of plants, animals, enterprise became the West India and and man appears to require the non-permaneuee of occasion when the company of the co The distribution of plants, animals, enterprise became the West India and and man appears to require the non-Pucific Steamship Company, which permaneuce of oceanie areas for elucidation. The Antarctic expeditions of recent years are expected to throw much further light ou the sub-piert, but aiready it is generally con-which the first, the Agamemnon, sailed sidered that the oceans and continents from Liverpool in 1868. In 1875 the

Company Ocean Steamship wasl In 1891 a registered as unlimited. service was begun, the ships engaged in which fly the Dutch flag, from Amsterdam to Liverpool and Java. The three services, with headquarters at Singaporo, run to (1) Western Australian ports; (2) Deli (Sumatra); (3) China. The Ocean Steamship Company is known as the Blue Funnel Line or the 'Hoit' Line from Mr. Alfred Holt. In 1902 it absorbed the Mutual Steam Navigation Company and became a limited company. The fleet consists of fifty-nine

boats, aggregating 261,617 tons.
Oceanus, a deity of Greek mythology. Homer piotures 'oceanus' as a great belt of river sweeping round the earth. Herodotus and the later Greek poets, like Euripides, identify him with the sea, and in after time he became synonymous with the Atlantic. Homer personifies Oceanus as the father of all things, even of the gods. Hesiod explains that he was the son of Uranus and Gæa, the husband of Tethys, and the father of all the great rivers besides 4000 sea

nymphs or Oceanides.

Ocellus, Lucanus (fl. c. 500), a Lucanian Greek, and member of the Pythagorean school, named from his birthplace, Lucania, in Italy. He is said to have written various philosophical writings, but the only one of his works extent is his On the Nature of the Universe, in the Ionic dialect, maintaining the doctrine of the

eternity of the world.

Ocelot, Panther-cat, and Tiger-cat are popular names applied to Felis pardalis, a species of Felidæ found in tropical America. It is a beautiful animal, averaging in length from two and a half to three feet, and has a tail about a foot long; the colour is usually tavny with dark spots or bars. The O. is a good olimber, and feeds for the most part on birds eaught in its native forests.

Ochakov, a fort. tn. of Russia, in the gov. of Kherson, on the Black Sea, 40 m. E.N.E. of Odessa. There is a considerable grain trade. Pop. (1897)

10,784.

Ochiali, or Ali el-Uluji (b. 1508), a Barbary corsair, born in Calabria. In 1570 he defeated the Turks off the shores of Sicily, though previously, as Pasha of Algiers, he had recaptured Tunis for Sultan Selim 1I.

Ochil Hills, a range of hills in Seotland, in Perthshire, Clackmannan, Kinross, and Fifeshire. They extend for ahout 25 m. from the Tay, near Perth, to the Bridge of Allan. The highest summit is Ben Cleuch, 2363 ft. Coal, iron, copper, and lead are found, and rich pasture is afforded to sheep and cattle.

Ochiltree, a par. and vil. of Ayrshire, Scotland, on the Lugar Water, 10 m. E. of Ayr. Pop. (1911) 2024. Ochino, Bernardino (1487-1564), an Italian reformer, born at Siena. monk at first, he was vicar-general of the Order of Capuchins, hut fearing the vengeance of the Inquisition for his heretical sermons, he fled to Geneva, and attached himself to Calvin. He confirmed his apostasy hy marriage, and after travelling as a Protestant preacher, accepted from Cranmer a prebendary of Canterhury, and published in Latin his spirited Trajedy or Dialogue against the Pope. But his apology for polygamy and his attack on the Trinity brought him into utter discredit with the Reformers, and eventually he died a miserable death from plague in Moravia.

Ochna, a genus of evergreen flower-ing shruhs (order Ochnaceæ) bearing yellow-flowered racemes and black or erimson fruits, which give an attractive appearance to the shrub when

grown in the hothouse.

Ochra, Okro, Gobbo or Gombo, the names for the pods of Hibiscus Abelmoschus (synonym Abelmoschus esculentus), a plant belonging to the order Malvaceæ, which is cultivated in the north-west of India. The mucilagin-ous pods are used as food and for

thickening soup.
Ochro, the name given to several varieties of native earths, which consist of a mixture of hydrated oxide of iron, with silica and alumina. They range in colour from light yellow to brown. The incrustation of oxides of other metals, antimony, bismuth, other metals, antimony, bismuth, nickel, etc., are also called Os., though they are not so important. Red and yellow Os. are prepared by grinding and washing, and are extensively used as pigments. O. is found in several parts of England, notahly in Anglesey and Devonshire; also in Canada, etc.

Ochrea, or Ocrea, a name given to the stipules or leaf-like bodies at the hase of the petioles, which are united in a sheath round the stem, as in the Docks and other memhers of the

order Polygonaceæ.

Ochida, or Okhrida, or Orid, a tn. of former European Turkey, in the vilayet of Monastir, 28 m. N.W. thereof, on Lake Ochrida. It is the seat of a Bulgarian bishopric. Pop. 18,000.
Ochierlony, Sir David (1758-1825), a Britich concerl, was born in Boston.

a British general, was born in Boston, Massachusetts, and joined the Indiau Army in 1777. In 1804 he defended Delhi against Holkar. During the war with Nepal (1814-15), he distinguished himself by his capture of the hill forts of the Gurkhas, and the Segauli treaty, which he secured, is still in force. His strategy brought the Pinissue without bloodshed.

Ocimum, a genus of half-hardy annuals and shrubs (order Labiatæ) bearing whorls of white flowers. basilicum is the sweet or common Basil, which is grown in kitchen gar-dens, its leaf tops being used for flavouring and other culinary purposes. Its seeds have numerous medicinal uses (see Basil).

Ockham, or Oceam, William of (d. c. 1349), called 'Doctor Singularis et Invincibilis,' an English schoolman, was born in O., Surrey. Like his master, Duns Scotus, whose rival in philosophy he afterwards became, he belonged to the order of Franciscans, and in 1342 became their general. For his implication in the revolt of the order against Pope John XXII., at Perugia (1322), and for his writings against papal supremacy, he was afterwards excommunicated. In philosophy ho revived the tenets of nomi-The Dialogus gives the most ualism. complete expression of his religious views.

Ockley, Simon (1678-1720), an English Orientalist, born at Excter. became vicar of Swavesey, near St. Ives, where he passed most of his life. His chief work is The History of the Saracens (1708-18), and ho also wrote The Improvement of Human Reason.

Oena, or Tirgu, a tn. of Roumania, in the prov. of Bacau, on the R. Troiu, 75 m. S.S.W. of Jassy, with salt works. Pop. 8000.
O'Connell, Daniel (1775-1847), 'The

Liberator, an Irish patriot and orator, born near Cahirciveen, co. Kerry. In 1798 ho was called to the Irish bar. As a lawyer ho displayed an exceptional gift for examining witnesses, whilst his vigorous and carnest oratory exercised a powerful influence over the jurymen, as later over the House of Commons, to which he was returned in 1828. The year 1829 saw the emancipation of the Irish Catho-

lies—a reform which would never ' been for · . realised .. deli con-

ciation. In 1841 O' . aud greater agitat the repeal of the U1.

at the head of a very castiles, and O'C. realised that the Catholics of his country would win nothing from a Tory government. The activities of the old association were revived, and huge mass meetings were everywhere organised. O'C. felt confident of success, when he was condemued to prison on a charge of sedition (1811). A few months later he was set at He entered the diplomatic service in

dari War (1817-18) to a successful liberty, but a shattered constitution, a devastating famine, and a disgust with those revolutionary spirits who publicly advocated physical force, combined to defeat his ends.

O'Connell, Daniel, Count (1745-1833), a French general, unclo to Daniel O'Connell, the Liberator. He served in the royal Suedols, the Irish brigade, and the German regiment of Salm-Salm. In 1792 he shared the disasters of the Bourbon princes, and afterwards joined the other emigres

In London. At the siege of Gibraltar (1782) he saved the life of Charles X. O'Connor, Arthur (1763-1852), an Irish rebel, entered the Irish House of Commons in 1791 in the Liberal inter-The French Revolution turned him into a republican, and in 1796 he joined the United Irishmen, and later became editor of the Press. In 1798 he was tried for high treason, and was imprisoned for five years. After his release he went to Frauco, where he represented the Irish revolutiouary Ho was made a general by Napoleon in 1804, but was not engaged in activo service. Ho never returned to England, and in 1818 became a naturalised Frenchman.

O'Connor, or Connor, Bernard (1666-O'Connor, or Connor, Bernard (1666-98), an Irish physician and author, horn in Kerry. About 1694 he aeted as physician to John Sobieski, king of Poland, and returning to Englaud the following year, lectured with success at Oxford, Cambridge, and in London. His chief works wero: Dissertationes Medico-Physica, and Evangelium Medici, published in 1695 and 1697 respectively, tho latter being an effort to explain on natural urinan effort to explain on natural principles the miraculous cures performed by Christ. Iu 1698 O'C. published a History of Poland.

O'Connor, Feargus (1794-1855), a Chartist, cailed to the Irish bar, but it is as a politician he became noteri-He was an active supporter of the Reform Bill of 1832, and was returned to parliament for eo. Cork. In 1835 he was unseated on account of not being possessed of the necessary realised property qualification, and soon after union of allied himself with the Chartists, and deli con-llo Asso-Chartists. From 1817 he sat in the mmons for Nottlingham. very prominent in the

> defy the government by marching to Westminster to present their petition. He was, In 1852, declared to be in-

sane, and was placed under control.
O'Connor, Sir Nicholas Roderick
(1843-1908), a British diplomatist,
born at Dundermot, co. Roscommon.

1866, and four years later became interval in the scale which has never third sccretary at Berlin. In 1883 he was made secretary of legation at Pekin, and subsequently consul-general in Bulgaria; minister at Pekin, and St. Petersburg, and ambassador at Constantinople in 1898, where he passed the remaining ten years of his life, working strenuously for the policy of administrative reform.

O'Connor, Roderick (1116-98), the last king of Ireland, acquired the title in 1166, and nine years later acknowledged the supremacy of Henry II. of England, being defeated by Strong-bow in 1171. Although forced to submitted to English rule, and was inally deposed. Consult O'Conor Don, O'Conors of Connaught, 1891.
O'Connor, Thomas Power (b. 1848), an Irish politician, born at Athlone,

Ho entered journalism as a junior reporter on the Saunders' Newsletter, a Dublin conservative journal, and three years later went to London in search of fresh journalistic work. Ho found employment on the staff of the Daily Telegraph, becoming sub-editor, and gave this up for an appointment in the London office of the New York Herald. 1880 he entered parliament as mem-1880 he entered parliament as member for Galway, and became a prominent personality in the Parnellite party. Since 1885 he has been M.P. for Liverpool, having been returned five times. Ho is familiarly known as 'T. P.,' having founded and been first editor of T.P.'s Weekly, M.A.P., The Star, The Sun, and The Weekly Sun, of which the first three still flourish. His publications include Lord Beaconsfield: a Biography: Glad-Beaconsfield: a Biography: Glad-stone's House of Commons, The Par-nell Movement, Napoleon, In the Days of my Youth, and numerous essays and articles.

Oconto, a city of Wisconsin, U.S.A., in Oconto co., on the Oconto R., at the entrance into Green Bay, 25 m. N.E. of the head of the bay, and is an important centre for the lumber

trade. Pop. (1910) 5629.
Ocotea, or Oreodaphne, a genus of tropical American trees (order Lauracem), bearing tough alternate leaves and racemes or panicles of small green flowers. O. bullata is sometimes grown in the greenhouse. O. opifera exudes a volatile oll when the bark is cut, and the fruit is sometimes distilled in Brazil to yield an oil used as an emulsion.

Octacamund, see UTAKAMAND.

Octans, a small constellation near

varied, extending from any one note to the next corresponding note above or below, as C to C, E to E, etc. The or below, as Cto C, E to E, etc. The C. of the diatonic scale is described thus, taking the scale of C: C, tonic, 1st degree; D, supertonic, 2nd degree; E, mediant, 3rd degree; F, sub-dominant, 4th degree; G, dominant, 5th degree; B, leading note, 7th degree. The O marks the length of scale as scale in one two three or scale, as, scale in one, two, three, or four octaves. There are usually seven Os. in the pianoforte.

Octavia: 1. A sister of the Roman emperor Augustus. She first married Marcellus, consul, in 50 B.C., and on his death became the wife of Mark Antony (40 B.C.), who, however, forsook her in a short space of time for Clcopatra, which led to the war between Antony and Augustus. O. was noted for her beauty and womanly virtues. She died 11 s.c. 2. (b. c. 12 A.D.) A daughter of the emperor Claudius and Messalina, and wife of Nero, who in 62 A.D. divorced her, on account of her being barren, and later accused her of unfaithfulness and had her put to death in 62 A.D

October (Lat., octo, eight), originally the eighth month of the old Roman calendar, the year beginning in March. It retained its old name in the Julian calendar, but then became the tenth month with 31 days. The Slavs term it yellow-month, from the falling of the leaf, and an old name for it in Germany was 'wine month.' In England it has long been the chief month for brewing. The principal ecclesiastical feasts selabanted during the month are celebrated during the month those of St. Luke on the 10th and St. Simon and St. Jude on the 28th.

Octomeria, a genus of small epi-phytal orchids bearing yellow, purple and white, spotted with red, flowers. They are grown in moist fibrous peat and sphagnum in the warm greenhouse.

Octopus, a name for large numbers of tetrabranchiate cephalopods, with cight arms and without the internal shell or 'bone' which is found in the mantle of many cephalopods. The body is oval or rounded, and the suckers are generally sessile. They are widely distributed on the shores of almost all temperate and tropical seas, and do not attain the great size of some of the decapod outtles. mature females are extraordinarily prolific, and may lay as many as 50,000 eggs in the course of a few days. The eggs resemblo grains of tho S. Polc, above Paye and Apus, formed by Lacaille (1752).

Octave is an interval in music of eight diatonic degrees, or twelve chromatic degrees. It is the one

These are fixed to a rock or stone, and

Os. spend attention the whole time. Os. spend the daytime lying hid in the shadow of rocks hut are more active at night. Their powers of colour change have

often been observed. Octroi, a term used with special reference to the system of duties imposed on different articles coming into different French districts or municipalities. In effect it is a kind The system was of inland tariff. abolished for a short time during the revolution, but shortly afterwards re-established. There has been occasional if half-hearted agitation for its abolition since that time; but to-day it flourishes in unabated vigour. The chief point of attack has always been not so much the system itself, as the abuses to which it is liable when the collection of the duties is farmed out to contractors, in the analogy of the old Roman vectigalia. Farming-out has now for long been as strictly regulated as the scale of rates. By an Act of 1816 only such articles as are intended for local consumption are dutiable, with the exception of various necessaries of life like flour, dutiable, and grain, fruit, fish and vegetables. The system is also in vogue in parts of Italy and the Iberian Peninsula.

O'Curry, Eugene (1796-1862), an Irlsh scholar, born at Dunaha, co. He was first employed in the topographical and historical section of the Irish ordnance survey, and in was appointed professor 1894 was appointed professor of Irish history and archaeology at the Roman Catholic University of Irelaud. Ho translated the aucient Brehon laws, the Book of Lismore, etc., and published three volumes of lectures entitled On the Manners and Customs of the Ancient Irish (1873).

Odal, sec ALLODIUM.

Odawara or Odowara, a tn. of Hon-shiu, Japan, 34 ni. W.S.W. of Yokohama. Pop. 16,400.

Odde, a vil. of Norway, in S. Bergenhaus, on the Sor Fjord, 18 m. S.E. It is a popular tourist of Bergen. eentre.

Oddfellows. Thero is much not ahove two centuries old. Oddchester Unity Independent Order of and to glvo temporary help to memorary
as Aristotle knew, the period of in- to its own laws, was the obligation to cubation is fifty days. The female render assistance to every brother watches over them with eeaseless who might apply for it in sickness, distress, or other misfortune. seems that the existing orders of O. still retain some of the mystic signs, grips, and initiatory rites peculiar to freemasons; but, generally speaking, they are rather to be regarded as fully fledged friendly societies (q.v.), whose transactions in their essentials are quite open, and not as they once were, secret societies. Whether secret societies or not, they are, of course, perfectly lawful, and unex-ceptionable, and the Acts of George III. for punishing criminally secret societies in general, made special exceptions in the case of societies for charitable purposes and freemasons' lodges, exceptions the more ohvious in the case of O. from the text of their general laws which enjoined assistance only to such brothers as might he well attached to the queen and government. Manchester Unity Independent Order of Oddfellows; this great friendly society was estab-lished in 1810. Its objects are similar to those of most other societies lar to those of most other societies (see Friendly Societies.) Any respectable person not under 16 nor over 45 may be proposed for membership hy a subscribing member, but must undergo a medical examination. There are also juvenilo and female The entranco fee varies in different districts, but is never over 10s. 'The contributions and benefits are graduated according to the ago of the member, but is uniform in all of the memoer, but is uniform in an districts included in the N. London area and 1 m. S. of King's Cross: £8 at death, £4 on wife's death, Ss. full and 4s. half siek-pay, for a menthly contribution of 1s. 2d. to 2s. 6d. The different districts may adopt tables giving higher rates, and by additional subscrip-tions the sum payable at death may be as much as \$200. The institution of a widow and orphan fund is optional. Administration is by a central committee of district deputies, the four principal officers, nino directors and the last past-master. the end of 1910 the funds were ne common between Oddfellowship and less than £15,000,000, and the total Freemasonry (q.v.), although apparmemhership \$90,538 adults, 128,367 ently the institution of the fermer is juveniles. Present offices, 97, Grossont venor Street, Choriton-on-Medicek. Manchester. Grand United Order of fellowship hegan in Manehester, in Manehester. Grand United Order of which town is now situated the registered offices of the largest friendly leading to the

Memhership, 542,968. offices, All Saints, Manchester.

Ode (Gk. ψδή, a song), originally any lyrical piece adapted to he sung. In the modern use of the word, Os. are distinguished from songs by not heing necessarily in a form to he sung, and hy embodying loftier conceptions and more intense and passionate emotions. The language of the O. is therefore abrupt, concise, and energetic, and the highest art of the poet is called into requisition in adapting the metres and cadences to the varying thoughts and emotions. Hence the changes of metre and versification that occur in many Os. The rapt state of inspiration that gives birth to the O. leads the poet to conceive all nature as animated and conscious, and, instead of speaking about persons and objects, to address them as present. Among the highest examples of the O. are the Song of Moses and several of the psalms. Dryden's Alexander's Feast is reckoned one of the first Os, in the English language. We may mention, as additional specimens: Gray's Bard, Collius' Ode

in Child-

hood.

Odenathus or Odænethus, a cele-brated prince of Palmyra, in the latter part of the 3rd century, who re-covered from the Persians the Roman E. and restored it to the empire, after a series of brilliant successes. For these he was rewarded by the Em-peror Gallienus with a triumph, and soon hegan to aim at independent empire. He was assassinated when starting to Cappadocia to put down the Goths, and on his death was succeeded in his position by his wife, the celebrated Zenohia.

Odenkirchen, a tn. of Prussia in the Rhine prov., 21 m. S.W. of Düssel-dorf, on the l. h. of the Niers. Spinning, weaving, dyeing, and tanning are among the industries. Pop. 20,049.

Odense, a tn. and seaport of Denmark, and cap. of the Is. of Funen, on the Odense R. 87 m. S.W. of Copcuhagen. The exports are agricultural and dairy produce, and the imports are timher, iron, coal, petroleum, ctc. The town is a hishop's see. King Canute and other kings are buried in the cathedral, and it was the hirthplace of Hans C. Andersen. Pop. 42,237.

Odenwald, a mountainous region of Germany, extending for 50 m. between the Neckar and the Main. It is well wooded, and many old castles crown its heights. The chief summits are Katzenhuckel (2057 ft.), Odense, a tn. and seaport of Den-

Registered | Neunkircher Hohe (nearly 2000 ft.).

and Krähberg (1965 ft.). Ode Ondo, a large tn. of Nigeria, W. Africa, 64 m. N.N.W. of Benin. Pop. 60,000.

Oder (Lat. Viadrus), one of the principal rivers of Germany, rises in the Leselberg, Moravia, and enters Prussian Silesia at Odersherg after a course of somo 60 m. After traversing Brandenburg in a N.W. direction, it crosses Pomerania and empties itself into the Stettiner Haff. Length 500 m.

Odessa (Gk. Odessus), an important seaport and commercial city of S. Russia, in the gov. of Kherson; stands on an acclivity sloping to the shore on the N.W. coast of the Black Sea, 32 m. N.E. of the mouth of the Dniester. The harhour is large and spacious, and is protected by large moles defended by strong works. The hay is frozen only in the severest winters, and then only for a short time. The town is well laid out, with wide streets and squares, plentifully supplied with trees. The city contains many fine edifices, as the cathe-

tains many fine edifices, as the cathedral of St. Nicholas, the imperial strains of the admiralty, the customaximal strains of the admiralty, the customaximal strains of the admiralty over 3100.

The principal exports are wheat and other sorts of grain, linsed, tallow, leather, caviare, fish, and wool. The exports amount to ahout \$17,000,000, and the imports to \$3,000,000. Pop. \$178,900. In ancient times O. was inhabited by a Greek colony, and later by Tartar Greek colony, and later by Tartar tribes. In 1793 a Russian fortress was built here, and port. During the a town and port. During the Crimean War (1854) it was bom-crimean War (1854). In 1905 it built here, and hecame the nucleus of suffered from a naval mutiny and riots.

Odeum, or Odeon (Gk. ψδείον), among the ancients the name for a public huilding devoted to performances of vocal and instrumental music. The O. was smaller than the dramatic theatre, and usually roofed in. The oldest known in Greece was the Skias at Sparta (c. 600 B.C.). The O. of at Sparta (c. 600 B.C.). The O. of Pericles on the S.E. slope of the Acro-

Œdema

large scale, and many of them are to be seen at Paris, Brussels, Ghent, and Bruges.

Odeypoor, see UDAIPUR. Odhner, Klas Theodor (1836-1904), a Swedish historian. In 1871 he becamo professor of history at Lund, and was subsequently elected a member of the Swedish Academy and royal record keeper. His publications include: Sveriges Politiska Historia under Koning Gustaf III.'s Regering, 1895-1900: Orsakerne till Gustaf II. Adolfs deltagande i 30 åriga Kriget, 1882, etc.

Odilon - Barrot, sce BARROT. CA-

MILLE HYACINTHE ODILON.
Odin, Woden, or Wnotan, the supreme god of Toutonic tribes, identified under Roman influence with Mcrcury, whose day was teutouised into 'Woden's Day' (Wednesday). O. is regarded as the source of wisdom and valour, and the patron of culture and heroes. In Norso mythology O. held

Ases ' or a high place among the ' secondary gods. Ho was, in all pro-bability, originally a storm-god, his uame signifying 'mad' or 'the raging onc, and he is attended by two ravens and two wolves, and riding the borse

Slelpnir.
O'Donnell, Leopold, Duke of Tetuan (c. 1809-67), a Spanish general and statesman, born at Santa Cruz, Tencriffe, of Irish extraction; entered the army at an early age, fighting for the Queen against the Carlists in the Civil War (1833). In 1840 he sided with the Queen-mother, Muria Christina, and shared her exile in France. He be-came the enemy of Espartere, whom he drovo from power in 1843, but two years later was appointed minister of war under Espartero, and in 1859, as Prime Minister, led an expedition the Moors, for which he received his dukedom.

O'Donovan, John (1809 - 61), an Irish historian and archæologist, born in co. Kilkenny, Ireland. He prepared a translation of the Brehon laws, and was actively engaged on the Ord-nance Survey of Ireland. In 1832-36 ho wrote a translation of the Annals of Ireland by the Four Masters, published 1848-51. He also translated and cdlted for the Irish Archaeological Society The Battle of Magh Rath. 1845 he published a grammar of the

Irish language.

Odontoglossum, a genus of orchids, most of which can be successfully grown in a cool house, and which, on account of the beauty of their flowers and their general grace, are the most popular orchid genus. Most of them aronatives of S. America. Tho flowers are borne ou a long spike from five to forty in number, and in a few species fluid into the tissues or eavities of the

pictures are, for the most part, on a these spikes are branched and bear a hundred or more blooms. The colours nre chiefly brown, yellow, or white, and are often spotted.

Odontopteryx (Gk. tooth. δδούς, πτέρυξ, wing) is a fossil bird of tho family Steganopodidæ. Its romains are found in the Lower Eccene of

Britain.

tooth, oppis, bird) is the name applied to a group of birds found only in the fossil state, which were characterised by having true teeth in their jaws. extent of the term varies with different ornithologists, but it usually includes the important genera Hesperornis and Ichthyornis, both of which belong to the Cretaceous period.

Odontospermum, a genus of composite plant containing about a dozen species, which occur round the Mcditerranean. O. pygmacum is one of the best-known species, and is peculiar on account of its habit of retaining its sceds in dry weather, and setting them free when the moist condition of the

soil would favour germination. Odorio(1286-1331), an Italian monk, born at Pordenone or Portenan in the Fruili. He became a missionary, and travelled over the greater part of Asla. An account of his journeyings is contained in his Life and Travels, pub-lished after his death. See Venni,

Elogio storico del B. Oderico, 1701. Odoven, a com. In tho prov. of Drontbe, Netherlands, 9 m. S.E. of Assen. Pop. 10,212.

Odysseus, see ULYSSES. Odyssey, see Homen.

Œcumenical, or Ecumenical (through Lat. from Gk. -from the who

a term applied t

whole Christian in the general councils from that of Nicaea Apostles' Creed, Councita). tho Nlecno The Creed, and that commonly called the Creed of St. Athamsius are spoken of as Œ. symbols, being held throughout the whole Church. The Roman Catholic Church considers a council Œ. if summoned by the Popo from the ln communication churches Rouic.

Œcumenius, Blshop of Tricca in Thessaly, supposed to have flourished in the 9th or 10th centuries. To hlm are attributed several commentaries in Greek on books of the N.T., on the Gospels, Acts of the Apostles, Pauliue Epistles, and Catholie Epistles. His works were published at Parls in Greek and Latin in 1631.

Ocdelem, a com. in the prov. of W. Flanders, Belgium, 6 m. E.S.E. of Bruges. Pop. 5500.

Œdema, the infiltration of serous

body, particularly with regard to the subcutaneous connective tissue, collections of serum in internal cavities, mencement of a new era in Danish or when widely diffused being more literature. Two years later he pubgenerally known as dropsies. Cede-lished two volumes of Poetiske Skrifmatous effusions are characteristic of | ter, to rid itself of the irritating agents by flooding the part with white cor-puscles. In other cases Œ, is caused by disease of the circulating system, the increased blood-pressure in a part causing copious exudation of the serum through the walls of the capilliaries. Malignant E. occurs at times by after scrious injuries, and is due to the activity of a specific bacillus; condition is characterised by rapid spread of the area of exudation, with destruction of tissuo and evolution of gas.

Oedenburg, a tn. in Hungary, cap. of co. of same name, 19 m. S.E. by E. of Wiener Neustadt, situated in a wine-producing district. Its chief manufs are agricultural implements, sugar, preserved fruits, etc. Pop. Its chicf 34.00Ó.

Oedicnemus, a genus of Plovers

(q.v.).

Edipus, in Greek mythology, was the son of Laius, King of Thebes, and of Jocasta. His father having been warned by an oracle that he would warned by an oracle that the baptish at the hands of his offspring, E. was exposed on Mt. Cithæren, whence he was rescued by a shopherd of Time Polybus of Corinth. The of King Polybus of Corinth. The child was brought up at Corinth as the king's son. When he had grown up, he was told by the Delphic oracle not to return home as ho must in-evitably be the murdcrer of his father and the husband of his mother. He oonsequently fled from Corinth, and on his way to Thebes slew Laius in a quarrel, being ignorant of the identity of his antagonist. Œ. then delivered the country from the Sphinx, and was rewarded with the hand of Joeasta, by whom he had Eteocles, Polynices, Antigone, and Ismene. As a punishment for this incest Thehes was devastated with a plague, and the oracle declared the country could only be delivered by the expulsion from it of the murderer of Laius. Œ. made careful inquiries, and discovered to his horror that he was the guilty man. Jocasta hanged herself, and Œ., having put out his eyes, left Thebes, led by his daughter Antigone, and died at Colonus, near Athens. His tragio history was set forth by Sophocles, Eurinidea and English Euripides, and Æschylus.

Œhlenschlager, Adam Gottlob (1779-1850), one of the leading Danish romantio poets, born in Copenhagen. first of his tragedies was

and then travelled on most forms of inflammation, and are Continent for four years. In 1810 he due to the natural effect of the body returned to his native place, and was appointed to the chair of æsthetics in the Copenhagen University. publications include Helge, Nordens-guder, and Dina (1842), the most successful of the later tragedies. In 1830-31 an Autobiography appeared, and in 1850 his Reminiscences. See Lives Arentzen (1879) and Nielsen (1879).

Ehlschlager, see OLEARIUS, ADAM. Ociras, a tn. in tho state of Piauhy, Brazil, 93 m. S.S.E. of Therezina. Pop. 5000.

Oeland, a long and narrow Swedish island in the Baltie, separated from Sweden by Kalmar Sound. It is 10 m. broad and covers an area of 519 sq. in. It is well wooded in parts, and has good pasture ground for cattle. There are good fisheries all round the coast: cement and alum works; and grain and sandstone are largely exported. Borgholm, on the W. coast, is the cap, and only town. Pop. 27,000. Oelwein, a banking city of Fayotto eo.. Iowa, U.S.A., 14 m. N. of Independence W. S. ragshing shows and considerate W. S. ragshing shows and the considerate with the consideration of the company of th

dependence. Has machine shops and agricultural interests, and manufactures eloth and boots. Pop. (1910) 6028.

Enocarpus, a genus of S. American palms, bearing flowers in large spikes, followed by oval fruits from which wine is made. Œ. bacaba, a tall native of Brazil, and one or two other species are sometimes grown in peaty soil in the stovehouse.

Oenomel, a sweet liquid, a mixture of wine and honey, which was much in favour as a beverage among the ancient Greeks. The word has come to be figuratively applied to language or thought in which sweetness and

strength are combined.

Enone, in Greek mythology, the daughter of the river-god Cebren and wife of Paris, son of Priam, King of Troy, who afterwards deserted her for Helen. Ovid, in Heroides, v., gives a description of her grief on finding herself abandoned. See also Tennyson's Œnone.

Oenophyta, a tn. of ancient Greecc, Bootia, celebrated for the victory of the Athenians over the Besotians in 457 n.c., by means of which the former gained possession of Besotia.

Cenothera, agenus of hardyannuals, biennials, and perennials (order Onagracese), natives of America. Cenothern is the fragrant, yellow-flowered evening primrose which has so long Haakon Jarl (1807), followed by Cor- been grown in gardens that it has

become naturalised. Some other species are, like it, night-flowering, but many, notably Œ. fruiticosa, bloom only in the day. A number of species are now incorporated in the genns Godetia.

Oerebro (Swedeu), see OREBRO.

Oersted, Hans Christian (1777-1851), a Danish physicist, born at Rudkiöbing. He was appointed professor of physics at Copenhageu in 1806. His greatest discovery was the result of experiments ou the magnetic needle with the electric current, described in his Experimenta circa Effectum Contlictus Electrici in Acum Magneticam. He also published a Manual of Mechanical Physics, and wroto numerons studies in chemistry, popular science, metaphysics, etc. Most of his works have been translated into Ger-See Biography by Hauch and Forchhammer (1853).

Oesel, an island in the Baltle, at the entrance of the Gulf of Riga, belonging to the Russian gov. of Livonia. It is 45 m. long, and covers an area of 1000 sq. m. The coasts in the N. and S. are very bold and steep. Arensburg, on the S.E. coast, is the only town of importance, and carries on a trade of potatoes, grain, whisky, and fish. O. is noted for its small breed of hardy ponics, similar to those of Shetland. The coast fisheries, especially of seals, are important. Pop. 60,000.

Esophagus, see GULLET.

Estridæ, a family of dipterous insects consisting of large, hairy flies with very short autennæ inclosed in a cavity in the fore part of the head. with rudimentary mouth-parts. larve are nearly all parasitic on mammals, and the perfect insects are well known as the obnoxious bot-flies. The larve of Œstrus ovis lufest sheep; those of Gastrophilus equi prepare pupate in horses; while the larvæ · Hypederma lineala and H. bevis . found in cattle.

Octinger, Christoph Friedrich (1702-82), a German theologian born at Göppingen. He developed a theosophie system, which he set forth iu sermons and works collected by Ebmann. Iu all, he published about 70 works setting forth his theosophic views. See Lives by Auberlen and

Wächter.

Oettingen, a tn. of Bayaria, Germany, on the Wornltz. The principal mannfacture is that of musical instruments.

Ofen, the German name of Buda,

see BUDAPEST.

Ofen Pass, in the Berneso Alps, leads from the Swiss portion of the Inn valley to the valley of the Upper Etsch, from Zanez to Mcrls. 7071 it. Alt.

Offa's Dyke, an ancleat rampart | even the foreman or other employee

and fosse which formed the boundary between Mercia and Wales. It is supposed to have been constructed by Offa, King of Mcreia (d. 796), to separate England from Wales, although some antiquaries regard it as of Roman origin. It is traccable through Hereford, Shropshire, Montgomery, Debigh, and Flint, from the Wyo to the Dec.

Offenbach, a tn. of Hesse, Germany, on the l. b. of the Main, 5 m. S.E. of Fraukfort. The manufactures include fanoy leather goods, pocket books, albums, etc. town owes its prosperity to the settlement of the French refugees. Pop.

75,593.

Offenburg, a tn. of Germany in the duchy of Baden, 26 m. from Baden. Its industries consist in the manufacture of cotton and liuen goods,

machinery, malt, hats, tobacco, and glass. Pop. 16.840. Offensive Trades. This expression, This expression, as used in the Public Health Act, 1875, denotes certain specified trades. namely, those of a blood boiler, bone boiler, fellmonger, soap boiler, tallow melter, or tripe boiler, and also any other noxious or O. T., business, or other noxious or O. T., ousness, or manufacture. In construing words so general as 'any other, etc.,' the ordinary rule is to interpret them with the connotation 'of the same kind.' But under the Puhlie Health Acts Amendment Act, 1907, a local authority may apply to the Local Government Board for an Order declaring any part of that Act to declaring any part of that Act to apply to their district, and in dis-tricts to which Section 51 of the Act applies, O. T. will include any trade business, or manufacture which the local authority declare by Order confirmed by the Local Government iont the council

· penalty of £50, and a daily penalty is incurred by those who continue without such consent to carry on an O. T. established since 1875. With the object of abating nuisances from O. T., the Public Health Act, 1875, provides that if the medical officer of health or any ten inhabitants of a district or two legally qualified medical practi-tioners certify to the urban district

council that any candle-house, meltlog-place or house, seap-house, slaughter-bouse, or any place for boiling offal or blood, or for belling, burning, or crushing boues, or any place used for any business causing effluvia is a nuisance, and dangerous to the health of the inhabitants, the

council must proceed summarily against the owner or eccupier (or

for penalties; which penalties, on lores at first travelled from place to subsequent conviction, may be in-place, but later districts were formed creased to \$200. An action may also and the procedure systematised. The be brought in the High Court for The only defence nuisance (q.v.). is to show that the best practicable means for abating the nuisance were taken; but the court will sus-pend judgmont if the offender undertakes within a reasonable timo to employ practicable means to abate the nuisance. Local authorities also have statutory powers for regulating

alkali and chemical works.

Offertory (Lat. offertorium, a place of offering; au oblation), in the Roman Catholic Church, a sentence said or sung at Mass after the Creed. when this is said. In the Church of England the name is applied to the offertory-sentences appointed to be read by the minister after the Creed or sermon at the Communion, while the alms of the people are being col-lected. In recent times the name bas been transferred to the alms

themselves.

Office Found, in law, a phrase used to denote the finding of a jury in an inquisition or inquest of office, by which the crown becomes entitled to take possession of the real or personal property of a deceased person (escheat and bona vacantia respectively). The inquest of office is a prerogative mode of process, and was devised by law as an authentic means of giving the sovereign his right by solemn matter of record. As early as 1440 it was enacted that all grants by the king of forfeited land before 0. F. should be void. The inquiry or inquest is conducted by some officer of the crown warely constant. the crown, usually coroner (q.v.) or sheriff, and the facts left to the con-sideration of the jury. The effect of a finding for the sovereign, in the case of land, is to put the crown into immediate possession without the necessity of a formal entry. At the present day such inquests of office as may be held are confined to cases of the escheat of real estate, the crown in most other places availing itself of the ordinary remedics provided by law.

Office, Holy, or more completely the Congregation of the Holy Office of the Inquisition, forms a department of the Roman curia for the examination of books and the trial of ecclesiastical The history of the Spanish offences. Inquisition is notorious, but it is necessary to point out that this early came under the control of the monarchy, thus becoming a political rather than The institution a religious weapon. of the Inquisition dates from the time of Gregory IX., who entrusted the work of seeking out heresy chiefly to the Dominicans. The Inquisi-

place, but later districts were formed and the procedure systematised. The Inquisition was never set up in Eng-

land. See Inquisition.

Officer. This term when it stands alone is always beld to refer to an O. holding the King's commission. The Active Army List contains the names of all Os. serving either on full or balf pay. But the status of O. holds good even after retirement from the active list. Os. whilst on full pay are for-bidden to hold any municipal office, exempted from jury service, either coroner's, grand, or common juries, and may not become directors of any company. Special permission must be granted before an O. on the active list can leave the country. Although any O. can be dismissed at His Majesty's pleasure, nevertbeless it is only after trial by a general court-martial that an O. can be punished. The term field O. includes colonels, lieut-colonels, and majors. Captains, lieu-tenants, and 2nd lieutenants are

called company Os.

Official List, see STOCK EXCHANGE The Official Secrets. Official Sccrets Act of 1890 makes it a misdemeanour punishable with imprisonment not exceeding one year together with a fine, (1) to enter any place belonging to the crown, e.g. an arsenal or fortress, or other place where he has no right to enter, for the sake of wrongfully obtaining information, or (2) to obtain from any such place as above mentioned any document, plan, or sketch, etc., or knowledge of any kind, and communicate the purport of the same to a person not entitled to receive such communication, or (3) to communicate information from documents, etc., that have in any way whatsoever come into one's control or possession. But where the intention in so entering any such place or obtaining such plans, etc., is to communicate the information, knowledge, or document to a foreign govern-ment, the offender is liable to a maximum punishment of penal servitude for life. This last-mentioned proviso in the Act has been several times put into force within recent years against various German spies in England, reciprocal compliments being paid to

English spies in Germany.

Olfsets, in surveying, lines drawn perpendicular to a given straight line, along which distances can be mea-sured off. In architecture the sloping ledge in the face of a wall formed when the lower part of the wall is reduced in thickness is called an O.

Ofterdingen, Heinrich von, a famous

minnesinger (q.v.).
Ogam, or Ogham, a curious kind of writing or stenography used by the and some other Celtic nations in early Christian times. These 'Os.' were for the most part found incised on the edges of stone monuments in Munster and the south-west of Irciand, and monuments with similar though ogamic inscriptions have occasionally heen found in Ulster and other parts of Ireland, the purely Gaedheilg or Gaelic origin of this method of writing is rendered the more prohable by the fact that such monuments were so largely to be met with in that part of Ireland in which the ancient Scots first effected a landing. The writing itself consists mainly of short straight lines placed vertically and obliquely, or in various other positions relatively to a central horizontal straight line. The method is ingenious and certainly capable of expressing all the words of an ancient language, for the position and grouping of strokes is ohviously snsceptible of almost influite permu-Paiæotations and combinations. graphists have not, however, found the task of deciphering very easy, in spite of the key afforded to them in the historic Beek of Ballymote, vellum MSS, written in the 14th century, i.e. only some three or four centuries after the period when ogamic writing was last in use, as evideuced hy occasional notes in Os. found in a few of the MSS. of St. Gali. Apart from these marginal notes there is not anywhere extant a single piece of literature in ogamio characters, a fact which has led to the supposition that if O. was ever anything more than a method of shorthand, it was only so in pre-Christian times.

Ogbomosho, or Ogbomeshan, a tn. of S. Nigeria, W. Africa, 145 ut. N.E. by N. of Lagos. Pop. 58,000.
Ogden, a city of Utah, U.S.A., and the cap. of Weber co., on the Weber, 35 m. N. of Salt Lake City. Fruit-growing and farming are carried on, and silver and gold are worked in the neighbourhood. Pop. (1910) 25,580.

Ogdensburg, a city and riv. port of New York, U.S.A., in St. Lawrence co., on the St. Lawrenco R. It pos-sesses a considerable trade in grain and lumber. The maunts, are woolien

and silk goods, wooden ware and brass goods. Pop. (1910) 15,933.

Ogee, a moulding formed by two curves, the upper convex and the lower concave, called also the cyma reversa. In French, the ribs which in Gothic vaulting cross the vault dlagonally are known as ogivo ribs, and the adjective is also frequently applied to arches in a way that makes it practically synonymous with Gothic.

ancient Irish, the Gaelic races of Wales, Rhine Palatinate, 5 m. W. of Mannheim. Manuis. tobacco and textiles. Pop. 7751.

Oggione, Oggionno, or Uggione, Marco da (c. 1470-1549), an Italian painter, horn near Milan. He studied under Leonardo da Vinci, and made several copiesof his 'The Last Supper,' one of which is in the Royal Academy. He also executed frescoes for the church of S. Maria della Pace at Milan, the two best heiug 'The Marriage at Cana' and 'The Assumption,' both of which are now in the Brera.

Ogham, see Ogam. Ogilby, John (1600-76), a miscellaneous writer, born near Edinburgh. He accompanied Strafford to Ireland, and was made deputy-master of the revels, but his fortunes being rulned by the Civil War, he returned to Eugland. Having learned Latin he translated Virgil into Euglish verse (1649. 50), and heing successful in this attempt turned to Greek, and published his Homer in 1660. He was entrusted with the 'poetical part' of the coronation of Charles II. in 1661, but was unfortunate to lose his house and hooks in the great fire of 1666. He afterwards set up a printing press. from which he issued many beautiful books, the chief of which was a series of atlases illustrated by Hollar and others.

Ogilvie, Jehn (1797-1867), a lexico-grapher, born in Banffshire. In 1824 he cutered Aberdeen University, and in 1831 was appointed mathematical master in Gordon's Hospital. He compiled the Imperial Dictionary, 1850 (supplement, 1855); Comprehensive

zine, 1831-32, and worked for Biackie & Son's annotated edition of Stackhouse's History of the Bible, 1836.

Ogilvy, Gavin, 600 BARRIE, JAMES MATTHEW.

Ogietherpe, James Edward (1696-1785), an Engilsh general and philanthropist, the founder of the state of Georgia, born in London. Ho served under Prince Eugeno, and distinguished himself in the campaiga against the Turks, 1716-17. In 1722 he he he came M.P. for Hastemere, and in 1729 was chairman of the parliadebtors' mentary committee on Having thus gained some prisons. Having thus gained some knowledge of panperism and its consequences, he, ln 1732, obtained a charter for settling the colony of Georgia in America as a refuge for paupers and a barrier for British colonies against Spanish aggression. He met with some opposition, howover, in the adulnistration of his Oggersheim, at a. of Bavarla, in the colony, especially by his prohibition

Whitefield. But a noteworthy fact is that he defended his colony against tbo Spaniards by allying himself with the Indians. Returning to England in 1743, he took part in the Jacobite insurrection of 1745 and was accused of misconduct, and although quitted his life as a soldier was at an end, and he did not return to Georgia. He was a friend of Dr. Johnson, Boswell, Goldsmith, Burke, Walpole, and Pope has immortalised his name in the couplet :-

'One, driven by strong benevolence

of soul, Sball fly like Oglethorpe from pole to pole.

Ogmore and Garw, an urban dist. and tn. of S. Walcs, in the co. of Glamorganshire, 4 m. S.W. of Bridgend. Coal is extensively mincd. Pop.

of dist. (1911) 26,747.

Ogowe, Ogowai, or Ogoway, a rlv. of W. Africa, in French Equatorial of W. Africa, in French Equatorial Africa, rising in lat. 3° S., a little to the S. of Ngango. Its direction is N. to W., and then S.W., receiving several tributaries on both sides, including the Lolo and the Ivindo. It enters the Atlantio by a delta after a course of 750 m.

Ogulin, a com. of Hungary, in Croatia-Slavonia, in the co. of Ogulin, 40 m. S.E. of Fiume. Pop. 9000.
Ogyges, or Ogygus (Ωγύχικ), the

son of Becotus and one of the Becotian aborigines. He was king of the Hectenes, the oldest inhabitants of Becotia, which was visited during his reign by an inundation of Lake Copais. This flood is usually called after him the Ogygian.
Ogygia, a genus of trilobites be-

longing to the family Asaphide. The fossil species are found from the Upper Cambrian to the Silurian

O'Hara, Charles (1740 - 1802), Britisb general, was an illegitimato of James O., second Lord as and Monogahela at be W. foot of the Alleghanies, at Pittsburg, in the staff at Gibraltar from 1787, and five years later became lieutenant-governor. In 1793 be was governor of a area of 202,400 sq. m. In its Toulon, and was captured by the French, being exchanged in 1795. In that year he became engaged to Mary Southern states of Virginia and Windows to the Alleghanies, at Pittsburg, in 900 m., with a breadth of 1200 to 100 ft., draining, with its tributaries, course it separates the northern states for the broke it off and went to the broke it off and went to the staff at Gibraltar from 1785. In that year he became engaged to Mary Southern states of Virginia and Monogahela at the W. foot of the Alleghanies, at Pittsburg, in 900 m., with a breadth of 1200 to 100 ft., draining, with its tributaries, of Ohio, Indiana, and Illinois from the broke it off and went to the staff at Gibraltar from 1787, and 1000 ft., draining, with its tributaries, of Ohio, Indiana, and Illinois from the broke it off and went to the staff at Gibraltar from 1787, and 1000 ft., draining, with its tributaries, of Ohio, Indiana, and Illinois from the broke it off and went to the staff at Gibraltar from 1787, and 1000 ft., draining, with its tributaries, of Ohio, Indiana, and Illinois from the broke it off and went to the staff at Gibraltar from 1787, and 1000 ft., draining, with its tributaries, of Ohio, Indiana, and Illinois from the staff at Gibraltar from 1787, and 1000 ft., draining, with its tributaries, of Ohio, Indiana, and Illinois from the staff at Gibraltar from 1787, and 1000 ft., draining, with its tributaries, of Ohio, Indiana, and Illinois from the staff at Gibraltar from 1787, and 1000 ft., draining, with its tributaries, of Ohio, Indiana, and Illinois from the staff at Gibraltar from 1787, and 1000 ft., draining, with its tributaries, and 10 Tyrawley. Ho entered the army in Berry, but within a few months he broke it off and went to Glbraltar, where be had been appointed had been appointed.
There is a pen-portrait of

of negro slavery and rum, and he also and through the centre by 34°S. The had difficulties with the Wesleys and cap, is Rangagua. Area 2289 sq. nu. cap. is Rancagua, Area 2289 sq. ni. Pop. 93,000.

Ohio: 1. One of the United States of America, bounded N. by Michigan and Lake Erie; E. by Pennsylvania and Virginia, from which it is separated by the Ohio R., which also forms its southern boundary, separating it from Virginia and Kentucky; and W. by Indiana. The Ohio R. forms its boundary for 436 m., and its lake shore is 230 m. The bigh tablelands hilly, and in parts mountainous regions of O. are drained by numerous rivers, among which are the Great and Little Miami, Sciota, and Muskingum, affluents of the Ohio: and the Maumee, Sandusky, Huron, Vermilion, Cuyaboga, and Ashtabula. which empty into Lake Erie. The coal-bcds of Eastern O. are enormous, with abundant deposits of iron ore. Petroleum and natural gas, sand-stone, and limestone are produced. Thesoil is rich verywbere; the climate is temperate, with a liability to a cold in winter reaching sometimes to 20° below zero. The forests, which still cover large portions of the state, are rich in oak, black walnut, maple, etc. Horse-rearing, cattle-breeding, and dairy farming are important in-dustries. The chief agricultural productions are Indian corn, wheat, rye, oats, bay, sorghum, tobacco, hemp, peaches, apples, grapes, cattle, sheep, and swine. The chief manufactures are iron and steel, bricks and tiles, Portland cement, clothing, furniture, spirits, wines, cottons, and wooilens. A large commerce is carried on by the Ohio R., the lakes, two canals which connect Lake Erie and the Ohio. The state is organised in elgbty-eigbt counties. The chief towns are Cin-Cleveland, Toledo, cinnati. commat, Ceverand, Toledo, and Columbus, the capital. There were in 1910 9145 m. of railways. O. was organised and admitted as a state in 1803. Area 41,060 sq. m. Pop. (1910) 4,767,121. 2. Riv. of U.S.A., second largest affluent of the Mississippi, is there are falls), Wheeling, Maysville, governor. There is a pen-portrait of and Pittsburg and Cairo at its source him in Captain Hamilton's novel, and mouth. It is navigable from Whoeling, 100 m. below Pittsburg. It O'Higgins, an inland prov. of Chile, is the channel of a vast commerce, crossed in the extreme E. by 70° W., which it shares with its chief branches

the Tennessee, Cumberland, Wabash, which Green, etc.

Ohlau, a tn. of Germany in the prov. of Silesia, on the Ohlau, 16 m. S.E. of Breslau. Its tobacco and eigar manufs, are important, and there are brick works, machino works, and boot factories. Pop. 9036.

Ohlendorffia, a genus of shrubs (order Scrophulariaceæ). O. procumbens, a native of Africa, is sometimes grown in the greenhouse. It bears blue funnel-shaped flowers and is of

prostrate habit. Ohlenschläger, see ŒHLENSCHLÄ-

GER.

Obler, Gustav Friedrich, see ŒHLER. Ohligs, formerly Merscheid, a tn. of Prussia in the Rhine Province, 17 m. N. of Cologne. There are weaving and dycing works, four mills, breweries, iron foundries, and also manufs. of hardware, cutiery, and bricks. Pop.

27,839. Ohlmüller, Joseph Daniel (1791-1839), a German architect, born at Bamberg. He studied at Munich and iu Italy, and in 1835 became a mem-ber of the council for the direction of public works in Munich. He assisted Klenze on the Glyptothek in Municit. and built the brick Gothio church in

the Au suburb of the same city.
Ohm, see ELECTRICITY—Electro-

motive force and resistance.

Ohm, Georg Simon (1787-1854). German physicist. Ho announced his law of the theory of the voltale current in 1825, and published The Galvanie Circuit worked out Mathematically In 1827. He became professor at Mnnich in 1849, where he died.

Ohmacht, Landolin (1760-1834), a German sculptor, born in Wurteniberg. His works are characterised by berg. His works are characterised by their grace, and amongst them are mononuments to Generals Desaix and Kléber, Koch, professor of history, and Oberlin. He also executed 'The Judgment of Paris,' a group of four figures, in the royal garden at Munich; a statue of Neptune: Psyche; a marble effigy of Venus, generally considered his masteroiece, and a colossal sidered his masterpiece, and a colossal statue of Adoiph of Nassau at Spire. Among his busts are those of Lavater, Klopstock, Raphaci, and Holbein.

Ohm's Law, see ELECTRICITY.
Ohrwalder, Father (c. 1855-1913), late priest of the Austrian mission station at Delen. He became a missionary in early life, and in 1881 went with his party to Khartoum, ultimately

sucked in 1882, was dragged off with oils and Fats are either giveery his companions to the Mahdi's camp. esters of the fatty acids (animal and Ho describes his experiences in Ten venerable oils) or hydrocarbons Years' Capileily in the Mahdi's Camp, (universal oils). In the former, the

has becn translated into English. He died at Omdurman.

Oils

Oidium, a name given to the conidial form of various ascomycetous fungi (Erysiphaceæ) which give rise to what are popularly known as mildows and moulds. In this stage the white cobweb-like mycelia produce simple conidiophores, from which the conidia quickly germinate and grow in chains, covering the host as with a mealy powder. The life-cycle is completed in the autumn, when ascocarps, or perithecla, arise as small black points on the mycclium and produce spores which usnaily rcmain dormant through the winter and germinate in the following spring. In cases where the life-cycle is known the fungus is placed in its proper genus, but where the ascocarps are still undlscovered the use of the term generically is still adopted. See SPILEROTHECA UNCINULA.

Oil and Petrol Engines. seeMOTOR CARS ENGINES and

Motor Boats

Oil-beetie, the name given to any species of Meloë, a genus of Cantharide (q.v.), on account of the oil-like matter which it oxudes.

Oil-bird, see GUACHARO.
Oilcake, the richest and most concentrated of cattle foods, manufactured from oil-bearing seeds, after they have been crushed to extract some of the oil. The cakes in most common use in Britain are those prepared from linseed, cotton seed, and soya beans. Linseed cake contains from 10 to 12 per cent. of oil, and if fed in moderate quantities is the best stock food of its kind. Decortleated cotton cake is made from cotton seed after the husk has been removed, and is valuable for fattening builcoks and dairy cows. Undecorticated cotton cake, made from the whole seed, is generally given to cattie fattening upon grass. Soya-bean cake, a recent introduction, is valuable for all classes of stock.

Oil City, a city of Pennsylvania, U.S.A., in Venango co., at the mouth of the Oil Creck, at its junction with the Alleghany R., 52 m. S.E. of Eric. It is one of the chief oil centres in the state. The city has been three times partially destroyed by flood and fire.

Pop. (1910) 15,657.

Oilcioth. FLOORCLOTH SEC and LINOLEUM.

Oil Fish, see Golomynka.

Oil Fuel, see Fuels-Liquid Fuel. Oil of Vitriol, see Sulphumic Acid. Oil Rivers, see Nigen. Oils, Essential, see Essential Oils.

substance is a fat or an oil at ordinary temperatures. Oils may be colourless to yellow, are not miscible with water, and have a specific gravity of less than 1, and will be considered here as (1) mineral or bydrocarbon oils, and (2) fatty oils. (1) Hydrocarbon oils are obtained either by the distillation of oil-bearing shales (Scotland) or from the petroleum of America, Russia, etc. The Scottish oils are mainly paraffins (q.v.), the Russian petroleum is composed chiefly of naphthenes, while the American petrolcums consist of paraffins, with olefines and naphtbenes. For commercial pur-poses, crude petrolcum is distilled and fractionated. Thus are obtained colouriess oils used as solvents (petroleum ether), cleaning oils and oils for varnishes, burning oils (kerosene) and lubricating oils. (See Petro-LEUM.) These minerals are chemically more or less inert, and are un-affected by acids and alkalies at ordinary temperatures. (2) Fatty oils are obtained from animal fats and seeds of plants by pressure or extraction by volatile solvents. These fats and oils are chiefly composed of tri-stearin, tripalmiten, and triolcin, and are easily decomposed to giveroi (a.v.) and the fatty acids (see FAT). They are soluble in ether, benzine, and chloroform, and are only slightly soluble in electric (execut caster up soluble in alcohol (except castor oll which is soluble). The fatty oils are divisible into three groups: (i.) Drying These when exposed to the air absorb oxygen and harden. absorb oxygen and harden. Suen, oils are valuable as painting oils, e.g., linseed, poppy-seed, fir-seed, and Chinese-wood oils. (ii.) Non-drying oils are used for lubricating purposes. Such are butter, lard, tailow, olive, palm, whale, seal, and cocanut oil, etc. (lii.) Semi-drying oils which are intermediato between (i.) and (ii.) intermediato between (i.) and (ii.), e.g. rape, colza, castor, croton, and grape-seed oils. Boiled with caustio alkalies, fats and oils of this series undergo saponification, and are used in the manufacture of soaps (q.v.). Stearin is used in making candles, as also are palm oil and tallow. Castor oil is used in medicine, while some of these fats and oils are used as foods, viz. butter, lard, and cocoanut oil and others as burning oils-colza and sperm oils.

Oil Ships, or Oil-tank Steamers, form one of the classes of vessels which are expressly built with a view to the requirements of a certain class of cargo, and can under ordinary cir-

relative proportion of solid and liquid carriage of oil, but the Vaderland, glycerides determines whether the which was probably the first steamship built to carry oil, was built by Messrs. Palmer in 1872. Another Messrs. Palmer in 1872. Another early steamship of this type was the Zoroaster, built in Sweden in 1877, in which the oil tanks were separate from the hull: later vessels were built in which the plating of the hull itself formed the tank. The size of oil steamships varies in accordance with the length of journeys required, etc. : for long journeys vessels of from 6000 to 12,000 tons are found to be the most economical. The Pinna is a good example, being 420 ft. long, 52 ft. broad, 22 ft. deep, and accommodating 9000 tons of oil in 12 large tanks formed by one longitudinal and soven transverse bulkheads. Several oil-tank vessels have of recent years been fitted with internal combustion engines instead of steam. It is important in vessels of this class that the free surface of the oil should be as small as possible.
Oil Wells, see Baku and Penn-

SYLVANIA.

Ointment, a fatty substance of the consistence of butter, generally containing some medicinal agent, and intended to be applied to the skin for curative purposes. The fatty basis may be any substance sufficiently plastic, without any injurious action on the tissues and not liable to putrefaction; that most generally used is purified lard with an admixture of wax, the usual proportion being 80 parts of lard to 20 of wax. A barder ointment, used for conveying liquid antiseptics, is made up of 4 parts of solid paraffin, 1 of wool fat, and 5 of liquid paraffin. A soft ointment base in general uso consists of 11 parts of solid paraffin, 5 parts of lanolin, and 34 of liquid paraffin.

Oise: 1. A dept. in the N. of France, is bounded on the E. by the dept. of Aisne, and on the W. chiefly by that of Seine-Inférieure. Area 2272 sq. m. Pop. 411,028. It produces an immense quantity of vegetations. duces an immense quantity of vegetables. Cap. Beauvois. 2. A riv. of France, an affluent of the Seine, rises in the N. of the dept. of Ardennes, and flows S.W., joining the Seine at Confians-Sainte-Honorine after a course of 150 m., for the last 75

of which it is navigable. Oisin, see Osslan. Oita, a seaport tn. of E. Kiushiu Is., Japan, 100 m. from Nagasaki. Silk yarn is produced. Pop. 15,000. Ojibways, or Ojibbeways, see Chip-

PEWAYANS.

Oka: 1. A riv. of Siberia, Aslatic Russia, rising in the Sayan Mts. cumstances ho used for no other. As Russia, rising in the Sayan alts, early as 1863 there appear to have between China and the gov. of Irkutsk, and flowing N.E. through specially constructed tanks for the a wild mountain region for a course of

2. A riv. in Central Russia. Bratsk. rising in the gov. of Orel, and flowing many windings in a direction, for a course of about 900 m. in all, to join the Volga at Nijni-Its basin has an area of Novgorod. about 120,000 sq. m., and the traffic very considerable, it is 2.000,000 tons of corn, salt, metals, timber, etc., being loaded annually for

shipping in the river-ports of its basin. Okapi, the native name of the species of Giraffidæ discovered by Sir Harry Johnston in 1901 in the Seniliki Forest, Belgian Congo; it is known technically as Ocapia john-This giraffe-like animal differs from its allies in having a rather short tail, a short, thick neek, no external horns, but yestiges of horns are to be found on the frontal boue. The coloration of the O. is eurious, and the limbs hear long dark strines. tho back and sides are reddish-brown. while the limbs and part of the head Very little are of a creamy colour. ls known of the habits of the O. beyond that they live in pairs in dense torests.

Okayama, a tn. of Honshiu, Japan, cap. of prefecture of same name, 72 m. W. of Kohe. Has a fine castle and beautiful gardens. Pop. 95,000.

O'Keefe (O'Keeffe), John (1747-1833), an Irish dramatist and actor, whose plays enjoyed considerable popularity in London. They include and farees such as comedies Agrecable Surprise, 1781; Wild Oats, 1791; The Poor Soldier; and Modern Intiques. He wrote the popular song I am a Friar of Orders Grey.

Okefenokce (Okefinokoe, Okefonoko) Swamp, a large tract (c. 300 sq. m. in area) of S.E. Georgia, U.S.A., mostly in Charlton and Ware counties, just touching N. Florida. It is mostly cypress forest, haunted by allgators

and venomous snakes.

Okohampton, a municipal bor, and market th. of Devonshire, England, 21 m. W. of Exeter, on N. margin of Dartmoor, at the junction of the E. and W. Okcusent. There are pie-turesque ruins of a late Norman keep and of O. Castle. Pop. (1911) 3175. Oken, Lorenz (1779-1851), a Ger-man unturnlist, born at Bohlsbaeh,

Swabia. His real name was Oken-In 1802 ho published a work entitled Grundriss der Naturphilo-sophie, der Theorie der Sinne, und der darauf gegründelen Classification der Thiere, first of a series of works of the In 1828 he was apramo nature. years later at Zürich.

about 400 m., to join the Angara at | Pacific in the East of Siheria. named after the scaport of the same name. which was formerly a place of considerable trade. It is partly enclosed by Saghalien and Kamehatka. From November to April it is icebound, and fogs and storms are common. Its principal ports are Nikelalevsk, Okhotsk, Ayan, and Gizhiga.

Okhrida, Okhrid, or Orid, a tn. of Albania in European Turkey, 28 m. W. of N. Monastir. The former eathedral is now a mosque, and the population, numbering in all about 18,000, comprises Christian Servians, hammedans. Albanians.

Osmanli, etc.

Oki Islands, a group of islands lying N. of the prov. of Izumo, and a Japanese possession. There are, in all, four islands. Dogo being the largest: chief town, Saigo. The group has a coastliue of 182 m., and covers an area of 130 sq. m. Pop. 63,000.

Okinawa Sima, see Loo-CHOO. Okiahoma (a Choetaw Indian word meaning red people"), a south-central state (admitted 1907) of the U.S.A., bounded on the N. by Colorado and Kansas. Area 69,414 sq. m. The surface is principally an upland prairie, and large portions are ver upland fertile, though others are bare and arid. It is well watered by the Red and Arkansas rivers, with their affluents. The chief mountain ranges arotho Wichita Mts. in the southern part of the state : the Chautauqua Mts. in the ceutral portion, and the Ozark Mts., extending half-way across the state. principal rivers are the Arkansas Canadian, and Red, with their soveral tributaries. O. is noted for its diversity of crops; corn, cotton, wheat, oats, maize, potatocs, etc., being extensively cultivated. The first-named represents over two-thirds of the acre-The state also posago and value. sesses an abundance of fine timber. Potroleum, coals, rock-asphalt, llmestone, and gypsum are found, the value of the total inlineral product for 1911 being \$12,678,116. The principal manufs, are those closely allled with manuls. are those closery amed when agriculture. The chief elities are Guthrio (cap.), 11,654; Oklahoma Clty, 64,205; Muskogco, 25,278; Tulsa, 18,182; Shawnec, 12,474; and Chlokasha, 10,320. A part of the state is occupied by Indian reservations. Pop. (1910) 1,657,155.

Oku, Yasukata, Count (b. 1817), a Japanesesoldier. He ontered thearmy in 1871, and In 1877, during the Satsuma Rebellion, led the Imperial forces, and was besieged for four months in Kumamoto Custle. In pointed professor at Munich, and four 1895 he distinguished himself in the See Memoirs China-Japan War, and was rewarded by Ecker (1880) and Güttler (1881). With the title of Buron for his services. Okhotsk, Sea of, an inlet of the N. In the Russe-Japanese Wur of 1901-5

army, and won the victory of Kinchau, for which he was decorated and promoted to the rank of Count. From 1906-12 he was chief of the general staff.

Olacaceæ, a natural order of trees and shrubs, with alternate and often spiny or thorny leaves. The typical genus is Olax, which includes a number of evergreen climbers, natives of Asia and Australia, hearing small

flowers in spikes.
Olaf I. (Olaf Tryggvesen) (969-1000), King of Norway and son of Tryggve. On being proclaimed king, he set about the conversion of the country to Christianity, built the first churches, and founded the see of Nidaros, later Trondhjem. He entered into quarrels with both Sweden and Denmark, and finally met his death off the island of Svöld, near Rügen, where he was waylaid and defeated by the combined Swedish and Danish flects. After his death he

remained the hero of his people.
Olaf, the Saint (995-1030), a revered carly Norwegian king. He wrested the throne from Eric and Svend Jarl in 1015, and then endcavoured to terminate paganism with severity, which caused his subjects to seek protection in the territories of Knut. O. was, however, dethroned hy Knut in 1028, but in 1030 he returned with 4000 men and gave Knut battle at Stickle.

stadt, where O. was defeated and slain. O. was proclaimed patron saint of Norway in the succeeding century. Oland, see OELAND.

Olaus, Magnus, see Magnus. Olaus, Petri (1493-1552), a Swedish reformer. From 1525, with his brother Laurentius, he laboured to spread doctrines throughout Lutheran They also translated the Swedish. From 1531-33 Sweden. Bible into Swedish. O. was chancellor to Gustay Wasa, and preacher at Stockholm (1539). Ho was condemned to death (1540) for refusing to reveal a plot about which he had learnt through the confessional, but was pardoned and allowed to continue as pastor at Stookholm (1543). He left writings on religious subjects, a mystery play, and Svenska krönika (see cd. of 1860). Strindberg treated (see cd. of 1860). Strindberg treated his life dramatically. See also Schück, Olavus Petri, 1893,

Olax, the typical genus of the order Olacaceæ, consists of about thirty shrubs and trees inhabiting tropical regions of Asia, Africa, and Australia. The species are smooth evergreens, and have a disagreeable odour. O. Zeylanica is the malla-tree of Ceylon, the leaves of which form an ingredient

of curry.

Olbers, Heinrich Wilhelm Matthäus (Matthias) (1758-1840), a German phy-

he was in command of the second sician and astronomer, studied medicine at Göttingen (1777-80). His new method of calculating the orbit of comets, set forth in Abhandlung über die leichteste und bequemste methode die Bahn eines Komelen zu berechnen (1797, 1864), won him fame. He discovered the asteroids Pallas (1802) and Vesta (1807), and the O. comet of 1815. See Gesammelte IV erke (Sehilling's ed., 1894-1900, 2 vols., and a 3rd later vol.); Erman, Briefwechsel zwischen Olbers und Bessel, 1852; Barkhausen, Biographische Skizzen Verstorbener Bremischer Aerzte, 1844.
Oloott, Henry Steel (1832-1907), an

American theosophist and agriculturist. He was agricultural editor of the New York Tribune (1858-60), and special commissioner in the U.S. war and navy departments (1863-66). He helped to found the New York Theosophical Society, becoming its president (1875). O. edited the magazine Theosophist (1879-1907), and for his services to Hindu philosophy received the control that are actived the second three desired. ceived the sacred thread of the Brahman caste. His works include Sorgho and Umphee, 1857; People from the other World, 1875; Theosophy, Reli-gion, and Occult Science, 1885; Old Diary Leaves, 1895 - 1904; Esoteric

Buddhism.

Old Age Pensions. The English O. A. P. scheme is unique in that it does not rest upon either voluntary or compulsory contribution on the part of the recipients of pensions. It is thus a purely socialistic system, the moral justification for which is that it is a social crime that many aged and de-serving persons who may well have spent their whole lives in unremitting toil should find their sole hope of sub-The insistence in poor law relief. herent vice of a contributory system, apart from the fact that it constitutes an insurance and not a pension scheme at all, is that very few people of those who are now in receipt of pensions could possibly have set aside from their exiguous earnings anything by way of provision for old age. But the merit of a properly administered free merit of a property administered free pension scheme can be put on the still higher moral ground that far from being a mere object of pity and charity, an aged and penniless person who has worked as continuously as his opportunities would allow is a person to whom the state as representing society is really under some sort of obligation. It is true that from one point of view an O. A. P. of an amount varying from 1s. to 5s. a week may be looked upon as a form of out-door relief; hut the stigma of the charitable dole at once disappears if it be conceded that an aged and indigent worker is a servant of society, and as morally entitled to look for a

annuated civil servant.

The question of O. A. P. had been in the air for some time hefore the passing of the Act of 1908, and not only were various proposals submitted to the Royal Commission on the Aged Poor, which sat in 1895, but tho different recommendations of the Commission formed the subject of several hills in parliament, which were considered by parliamentary com-mittees in 1899, 1900, and 1903. The apparent dilatoriness of the legislaturo was due to a variety of causes, the chief of which were the preoccupation of parliament lu the Boer War and the protracted discussions over the principle of contribution. Moreover legislative experiments in one country are hound to have their effect upon other countries; and with the fact before them that the O. A. P. systems in vogue in New Zealand, Denmark, New South Wales, Victoria, and Germany rested upon a con-tributory hasis, voluntary or comtributory hasis, voluntary or com-pulsory, the House of Commous can hardly he blamed for having proeceded with caution. Mr. Asquith, in introducing the Budget of May 1908, pointed out that the social and economic conditions of the United Kingdom differed so much from thoso in countries like Denmark and New Zealand, that great circumspection should be exercised in proceeding upon lines which might not only admit subsequent development, but the experimental nature of which might well commit parliament 'to a mortgage of Indefinite amount upon the country. resources of the future estimated with reasonable accuracy. As a fact, the estimated cost of £7,440,000 for providing pensions to persons over 70 was under the mark, forthecostin 1911-12 was£12,450,000, and the estimated cost for the present financial year (1912-13) is £12,220,000 (though from these amounts must ho deducted about £1.144,000 representing the saving to the rates consequent on the automatle removal in 1911 of the pauper disqualification for old ago pensioners).

Up to 1903 the sebemo put forward by Mr. Chaplin's committee in 1899, and practically adopted by the Select Committee of 1903, was the only oue (if any) which under a Conservativo government would prohably have passed into law. That schemo was a passed into faw. That schemo was a liceting opinions on a dilicint subject. Statutory one, and though some of its proposals were adopted by the Liberals in 1906, its root-principle of The claimaut must have attained the contribution was blown to the winds ago of 70. (2) Must for the last 20 by Mr. Lloyd George's (Chancellor of years hefore receiving the pension the Exchequer) arguments that any have been a British subject, and for contributory schemo would practi- 12 of these 20 years have resided in

pension from the state as a super-really exclude women altogether, apart from the fact that the majority of working men cannot 'deflect from their weekly carnings a sufficient sum of money to make adequate provision for old age, in addition to that which they are now making for slekness, infirmity, and unemployment. The ago limit, too, was a thorn in the side of departmental committees. Most of the schemes, an that consid limit at 65 .

is fixed by t____

her of pensioners would be reduced by nearly 44 per cent., which on the estimated figures would have meant 387,000 old ago pensiouers. Tho actual number of pensioners in Great actual number of pensioners in Great Britain at December 1911 was 935,990, and in March 1912, 942,160, or about 1 person out of every 44 of the total population. The great majority of these were in receipt of the full pension of 5s., those in receipt of lesser sums being for all practical purposes a negligible quantity. It is obvious from these flexing that the obvious from these figures that the fears of the different committees were not groundless. But, indeed, no ono all conversant with poor law statisties could have failed to appreelate the fact that the cost would be heavy, for of the entire population of 65 years and upwards in the United Kingdom more than one-quarter were (1899) in receipt, or had been in receipt, of poor law relief. There can bo but little doubt that If all persons unless the cost of the Initial step were of 70, a fortieri 65, years of age were :dless of . .y would

> withIn limits, is a har, though moralists of a Tolstoyan hent of mind would be prompted to say at ouce that most criminality is the result of poverty Howover that may bo, a itself. sceptical and cautious British House Commons has in characteristic fashion evolved lu the Acts of 1908 and 1911 a schemoof a more or less tentativo naturo, and one which at least has the merit of effecting a practical compromise of the multitude of conflicting opinions on a difficult subject.

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United Kingdom (residence) abroad in the service of the crown, temporary absence not exceeding 3 months at any one time, all periods spent abroad by any person during which he has maintained or assisted in maintaining any dependent in the United Kingdom, absence on board a registered British ship, and residence in the Channel Is. or the Isle of Man by a person born in the United Kingdom, are all regarded as residence in the United Kingdom for the purposes of the Act). Under the Act of 1908 women who married aliens were disqualified; but the Act of 1911 provides that if the alien husband be dead, or the marriage has been dissolved, or the woman legally separated from, or deserted by, the alien hus-band for 2 years, the woman will not be disqualified for a pension. (3) Must satisfy the pension authorities that his yearly means do not exceed 231 10s. A claimant is disqualified (1) while actually in receipt of poor law relief other than medical relief or surgical assistance (including food or comforts) supplied by or en the re-cemmendatien of a medical officer. It is new ne disqualification that the claimant prier to the date of receiving his pension has been chargeable to the guardians. Claimants are not disqualified by reasen of peor law relief being given to a wife er other relative whem they are bound te maintain; but if children contribute towards the relief of their parents through the parish this will disqualify the parents from receiving a pensien, because ehildren are not bound to maintain their parents. (2) If he has habitually failed to work according to his ability. opportunity, and need, either for the maintenance of himself or those legally dependent upon him. But if ho has made provision for 10 years up to attaining the age of 60 against sickness or unemployment, by means of payments to friendly or other societies, he cannot be disqualified on the ground of 'failure to work.' It is the better opinion that no proof short of a conviction under the Vagrancy Acts would be sufficient evidence of habitual failure to work. (3) While he is detained in a lunatic asylumeither as a pauper or a criminal either as a pauper or a criminal lunatic. (4) For 6 months, if after attaining 60 years of age he has rendered himself liable to have a detention order made against him under the Inebriates Act, 1898. (5) During imprisonment for any offence, and for 2 years afterwards where the sentence was without the option of a fine and did not exceed 6 weeks; where the sentence exceeded 6 weeks, the subsequent period of disqualification is 10 years.

The rate of pension per week where the yearly means of the pensioner as calculated under the Acts of 1908 and 1911 do not exceed £21 is 5s.:

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28 17 6	31 10	ŏ	ĩ	Ŏ
31 10 0		n	o pēn	sion.

Calculation of yearly means.—In calculating the annual means of a claimant for a pension, account will be taken of the following items: (a) Five per cent. on his capital in any shape or form (in the words of the Act of 1911, 'one-twentieth part of the capital value of any property belong-ing to him ') and whether that capital be invested or not; (b) the cash income he may reasonably expect during the succeeding year (exclusive of O. A. P., interest on investments, and sums accruing from the profitable use of property net persenally used by him): this, in the absence ef other evidence, will be taken to be the inceme actually received during the past year; (c) the yearly value of any benefit or privilege (c.g. an easement (q.v.), fuel allowance, right of commen (q.v.); (d) the yearly value of any preperty in his personal use, furniture and personal effects te the value of £50 being excepted. The actual practice according to the first text the intervalue of £50 being excepted. ing to the instructions issued to the pension officers seems to bo to assume income frem furniture personal effects to be 4 per cent. on the value of the excess over the £50. In estimating the value of free board and lodging, the standard of living of the person with whom the claimant lives will be taken into consideration; and this, in towns, is generally taken to be about 5s., in rural districts 3s. 6d., a week; in Ireland, 4s. and 2s. 6d. respectively. The basis of assessment of property capable of investment is the income that might be derived from it if it were invested: but a claimant is not bound to convert his capital into an annuity, and his income must not be estimated on the assumption that he ought to do so. In the case of married couples, the income of each is reckoned at half the combined income of the couple. Under the Act of 1908, if it appears that the claimant has directly or indirectly deprived himself of any income or property in order to qualify for an O. A. P., or in order to get a higher rate of pension than he otherwise would be entitled to, such income or property will nevertheless be taken to be part of his means.

Mode of applying for pensions— Pension committees.—The authority

There are somo 280 of such committees, and somo 1200 sub-committees appointed by the former to act for specified districts. The form of claim for a pension may be obtained by the claimant free of charge at any post office at which he desires the pension to be paid to him. When filled up the form is to be delivered by the elaimant either to the postmaster or the pension officer of the district. must postmaster give elaimant all the assistance he can in cases of doubt. The pension officer is appointed by the Treasury, and is the Local Officer of Excise, or the Super-visor of Inland Revenue. His function is to investigate the claims sent in, and to report on them to the Pension Committee, which body then investigato the claims themselves and give their decision upon them. Before deciding adversely on a claim, they give the claimant an opportunity of being heard in support of his applica-There is an appeal from tho Committee's decision to the Local Government Board. Where the pension is allowed the pension officer gives the pensioner a book of pension orders enabling him to get payment at the post office. The Act of 1911 provides that a question may be raised at any time during which a person is drawing a pension as to whether he is properly qualified, or whether his means are such as to entitie him to payment at a particular rate. If a later decision of the Committee reverses a former decision, so as to give the peusioner a lower rate or no pension at all, he will not, in the or no pension at air, now me not, in the absence of fraud on his part, have to repay any sums received by way of pension. Conversely the Committee may at any time decide to give a higher rate of pension to a pensioner if his circumstances have so changed as to warrant the higher rate. person who knowingly makes false statements for the purpose of obtaining or continuing to obtain a pension, either for himself or any other person, renders himself liable to imprisonment not exceeding 6 months with or without hard labour.

Statistics.—The estimates for 1912-13 provide for the payment of £65,000 expenses of pension committees, and £417,346 expenses of government do-partments in the administration of the Acts. At the end of March 1912, the number of old age pensioners in England and Wales was 642,524, and in Scotland and Ireland 299,636, there being double as many in Ireland as in Scotland. Compared with total

for dealing with claims is the Local Wales about 18 pensioners out of Pension Committee appointed by the overy 1000 people; in Scotland, 19 borough county or district council. per 1000; in Ireland 46 per 1000.

Old Bailey, the name of a street in the City of London and commonly applied to the Central Criminal Court (q.v.). The street, which is one of the most ancient parts of London, is situated in the City liberty of St. Sepulchre's and parish of Smithfleid: but neither street nor court bears the slightest resemblance to the older street and tribunal of the same name. The district itself, even if over to be associated with the horrors of public executions and the ovidences of early notions of criminal justice, beasted trees and water some 700 years ago, at a time when the neighbourhood had oven then for long been a place of the dock and gallows. For we are told that in Cow Lane there was formerly a large pool called Smlth-field Pond, or the Horso Pool, and to the S.W. of this stood the gallows or public place of execution, which with naif irony was denominated the Elms, from the great quantity of such trees growing in that neighbourhood. Smithfield's rural simplicities, however, soon yielded to streets and large wooden buildings, and the gallows were moved further W. The O. B. itself was, according to antiquaries, a corruption of Balchill, an eminence on which stood the Baio or bailin's house, wherein was held a court (called by Stow the court of the chamber-laine, see Survey of London, 1603) for the trial of malefactors. Later antiquaries think this view probable from the fact that for centuries some such court was held in the O. B. or street entside Newgate, and that up to the end of the 18th century there was a hold called the Bale-dock where the sheriffs detained prisoners during the sessions. The O. B. and its curiors that the contract was a few to the contract the contract that the contract vironment was for years a most in-sanitary place, for we are told by Stow that 'a little lower in the O. B. (i.c. in the direction of the river) there was a large eistern with divers cocks which received the wasto water of the prison of Ludgate for the use of the neighbouring inhabitants.' Newgate became early the common gaof for London and Middlesex, and the London and Middlesex, and the sessions at the O. B. have from time lummemerial been held under the commission of gaoi delivery (q.v.) for Newgato, and of over and terminer (q.v.) for the City (see Chyrral Crimmal Court). Up to 1906 the sittings of the Central Criminal Court were held in the old court increase. were held in the old court-house, or tho O. B., but a handsome new building designed by E. W. Mountferd replaced the old premises in that year, and now occupies practically population, there are in England and whole site of what once was Newgate

New Bailey, is lofty and imposing, and over a great part of the vaulted brilliantly coloured are irescoes.

Old Believers, see RASKOLNIKI. Oldbury, a tn. of Worcestershire, England, 5 m. W.N.W. of Birming-

ham. It has iron and steel industries, chemical, aluminium, brick and tile works, and railway shops. (1911) 32,240.

Old Calabar, see Calabar (2). Old Castile, see Castile. Oldcastle, Sir John, Lord Cobham (d. 1417), an English nobleman of Herefordshire, who helped to sup-press the Welsh rising under Owen Glendower, and then fought for Henry IV. in Franco (1411). As a supporter of the Wycliffites or Lollards, he was condemned as a heretic by Archbishop Arundel (1413), but escaped to Wales. He was captured later and burnt to death. O. wrote Twelve Conclusions . . ., and other works. He is supposed to be the original of Shakespeare's Falstaff. wrote Twelve Conclusions .

Shakespeare

and Monuments of the Church, 1562, 1841; Gapsey, Life and Times of the Good Lord Cobham, 1842; Brown, The Leader of the Lollards, 1848.
Oldepharneveld Lord van 1847.

Oldenbarneveldt, Jan van (1547-

1619), see Barneveldt. Oldenburg, a grand-duchy of Northern Germany consisting of three distinct and widely separated territories, viz. Oldenburg Proper, the principality of Lüheck, and the principality of Birof Luneck, and the principality of Bir-kenfeld. The collective area of these districts is 2482 sq. m., and the total pop. is 483,042. Oldenburg Proper is bounded on the N. hy the German Ocean, on the E., S., and W. by the kingdom of Hnnover. The principal rivers of O. are the Weser, the Jahde, and the Hasse Value and other and the Haase, Vehne, and other trihutaries of the Ems. The country is flat, belonging to the great sandy plain of Northern Germany. Agri-culture, bec-keeping, and the rearing of cattle constitute the chief sources of wealth. There are numerous distilleries, breweries, and tan yards, and the manufacture of tobacco, bricks, and corks is carried on. Oldenburg is the cap. Pop. of Oldenhurg Proper, 391,246. The principality of Luheck is surrounded by the duchy of Holis surrounded by the duchy of Hol-this breed is essential, and no dog stein, and is situated on rivers suffers more from being kept chained Schwartau and Trave. Area 140 up. Many instances of the great sq. m. Pop. 41,300. The cap. is intelligence of typical specimens of Eutin. The principality of Eigenstithe breed are released, and then so sq. m. Eutin.

prison. The interior of the new court, berg. Its area is 192 sq. m., and its which has sometimes and without pop. 50,496. The polishing of stones, regard to history been termed the more especially agates, constitutes New Bailey, is lofty and imposing, one of the chief sources of industry. O. is a constitutional ducal mon-archy, hereditary in the male line of the reigning family. It is represented by three members in the Imperial Diet, and has one vote in the Imperial Federal Council. The territory was in ancient times occupied by the Teutonic race of the Chauci, who were subsequently merged with the more generally known Frisi, or Frisians. In 1180, the Counts of O. and Del-menhorst succeeded in establishing independent states from the terri-tories of Henry the Lion, which fell into a condition of disorganisation after his downfall. This family has continued to rule O. to the present day, giving, moreover, new dynasties to the kingdom of Denmark, the empire of Russia, and the kingdom of Sweden.

Oldenburg, Henry (1626-78), a natural philosopher, born at Bremen. He gained the friendship of Milton, Spinoza, Leibnitz, Bayle, and other eminent scientifio men, who founded the Royal Society of London, and in 1662 was appointed first secretary to same. From 1664 he began publishing its Transactions, and continued to act as editor for more than thirteen years. Ho wrote various pamphlets, both of a political and theological nature; Latin translations, and corresponded with the great scientific thinkers of France and Germany.

OldEnglish, see English Language. THE, and ENGLISH LITERATURE.

Old English Sheep Dog ('Bobtail'), formerly much used, and developed to a high degree of intelligence, by shepherds and drovers in the southern counties of England and Wales, but now a favourite show dog. The hard, shaggy coat should be free from curl. and have a dense waterproof underand have a dense water proof inter-coat. Its colour may be any shade of grey, grizzle, hlue, or blue merle, with or without white markings. The head should be big and square with a long, strong jaw, black nose, and small eyes: the ears should be small and covered with wavy hairs. The forelegs are with wavy hairs. straight, and the fect small and round. The body should he square and short. and the hind quarters high and heavy. The tail ought to be absent naturally, and pupples that are born with one should be docked when not more than four days old. Exercise for Eutin. The principality of Birken-the freed are related, and they are feld lies S.W. of the Rhine, and he-valuable equally as stock or sport dogs tween Rhenish Prussin and Lichten- or as companions and house dogs.

became very rare, in spite of the fact that it is the only English terrior so called. The head should be long, narrow, and flat, with a sharp tapering muzzle, muscular jaw, pronounced stop, and black nose. The eyes should be small and black, set fairly close together; the ears, formerly prick, should be round and flat. The rather long neck should be muscular: the forelegs straight, and the thighs comparatively large and muscular. The whip tail should be carried low. The coat must be close, hard, short, and glossy, and pure white-colours such as blue not being favoured. The ideal weight is between 10 and 15 lbs.

Oldesloe, a tn. of Schleswig-Hol-steln prov., Prussia, on the Trave, 13 m. from Lubeck. There are saline, sulphur, and other baths near.

3905.

Oldfield, Anne (1683-1730), commonly known as 'Nance,' an English actress, born in London. She made her début in 1700, and immediately gained popularity. In 1704 she played the part of Lady Betty Modish in Cibber's Careless Husband. She was the original representative of some 65 characters in tragedy and comedy, and soon came to be recognised as one of the most brillant as one of the day. Her chief successes of the day. Her chief successes were 'Lady Townley,' 'Sylvia,' 'Mrs. Sullen,' and 'Sophonisba.' See E. Robins, The Palmy Days of Nance Oldfield, 1898.

Oldforge, a bor. and township of

co., Pennsylvania, Lackawanna U.S.A., on Lackawanna R., 4 m. S.W. Scranton. Anthracite coal mined; glass, sllk, chemicals, and ferare manufactured.

(1910) 11,325.

Oldham, a parl., municipal, and co. bor. of Lancashire, England, 6 m. N.E. of Manchester. The town is mostly situated on a hill, and its growth as a manufacturing centre now gives it quite a modern appear-This growth is principally due to the close proximity of the Lanca-shire coalfields and the extension of cotton manufactures, dating from the latter half of the 18th century. Its principal buildings are a town-hall, Westliulme hospital, art gallery and museum, central free public library, hlne-coat school, etc. The Alexandra park was opened in 1865. Oldham manufactures fustians, velvets, cords, nankecns. It has large foundries, machine-works, and collieries in the near neighbourhood. Pop. (1911) 147,495.

Old (or White) English Terrier, an Moyne, near Tethury, Gloucester-old terrier breed; which after the shire. He was a favourite with the Kennel Club's abolition of cropping Earl of Kingston, the Earl of Rochester, Sir Charles Sedley and other wits, and gained the friendship of Dryden. O.'s reputation rests chiefly on his satires—he took Juvenal for his model, and though his works partake of the licentious sentiments of the time, they are full of force and spirit, and are original in their dramatic setting. He published Poems and Translations in 1683, and Remains in Verse and Prose appeared in 1684. The best edition of his works is The Compositions in Prose and Verse (1770), with memoir and explanatory notes by Edward Thompson.

Oldhamia, the generic name applied to several fossils found in the Cambrian system. Considerable doubt exists as to their meaning, and it is not known whether they are fossil forms of algæ, of zoophytes or polyzoa, or even whether they are fossils

at all.

Old Haven Beds, see ECCENE.

Old Meldrum, a par. of Aberdeen-shire, Scotland, 16 m. N.N.W. of Aberdeen. It has cotton manufactures and distilleries. Pop. (1911) 1200.

1200.
Oldmixon, John (1673-1742), an English historian and minor poet. He wrote dull histories on the British Isles and America: The British Empire in America (1708); Secret History of Europe (1712-15); Critical History of England (1724-6, 1730-9); History of the Stuarts; poems and plays, works of rhetoric and logic, and Essay on Criticism (1728), abusing Pone and others. Pone took revenge Pope and others. Pope took revenge in the Dunciad, ii. 283-90, and in the Art of Sinking in Poetry. See his Memoirs of the Press (1742); Cibber, Lives of the Poets; Baker, Biog. Dram.

Old Point Comfort, a watering-place of Elizabeth city, co. Virginia, U.S.A., at the mouth of James R.

Old Red Sandstone, the name given to the succession of sandstones, shales, and thin bands of concretionary limcstones which lie between the Silurian and Carboniferous rocks. These rocks were laid down in isolated basins or lakes to the W. and N. of Europe. To the S., marine conditions pre-vailed, and thus two types of strata comprise this geological system, viz. freshwater or lacustrine deposits (the O. R. S. proper) and marine deposits Devonian. Distinctivo names have been given to the basins in which these O. R. S. rocks were laid down, viz. Welsh Lake, Lake Calcolonia, Lake Orcadie, Lake Choviot, Lake Lorne, and Lake Munster. The 147,495.
O. R. S. attains a thickness of about 20,000 ft. in Scotland, and is subatirist and poet, born at Shipton divided into Lower, Middle, and Upper

groups. Enormous masses of con- wire netting. They need abundance temporaneous felsitic, and called the state of water from March to September, diabasic lavas and tuffs are found in and a temperature of about 70 deg. tho O. R. S. of Central Scotland, giving origin to the Cheviots, Pentland Hills, Sidlaws, and Ochils. The fauna of the period is remarkable for its fishes, such as Palæospondylus, Coccosteus, Dipterus, and Holoptychius. Giant Crustaceans and a few marsh plants (Psilophyton) are also found. In Norway, N. Russia, and Spitzbergen O. R. S. rocks occur with typical fisher and plant remains, and the O. R. S. o. N. America (New Brunswick) yields plant remains and occasional seams

Old Testament, see BIBLE.

Oldrown, a tn. of Penobscot co., Maine, U.S.A., on an island in Penob-scot R., 10 m. N.N.E. of Bangor. There are lumber mills and manu-factures of boots and shoes, woollens, boats, and electrical machinery. Pop. (1910) 6317.

Oldys, William (1696-1761), a literary antiquary and miscellaneous writer. He became librarian to Lord Oxford, a post he retained for about oxiord, a possible restated to about the years, and through the influence of the Duke of Norfolk ho was appointed Norroy king-at-arms. Besides numerous miscellaneous literary comprises evergreen and deciduous and bihliographical articles, he was trees and shrubs, with ornangental and the author of the Life of Sir Walle

 \overline{B} ritish Librarian, Spectator, The Harleian Miscellany. He also wrote several Lives in the Biographia Britannica and General Diclicator Dictionary. See Memoir by Yeo-well in Notes and Queries (1862, first

two months).

Oleacem, a natural order of trees and shrubs, of which Olea (Olive) is the typical genus.

Olea Europæa, see OLIVE.

Olean, a tn. of Cattaraugus co., Olean, a tn. of Cattaraugus co., New York, U.S.A., on Alleghany R., 60 m. S.S.E. of Buffalo, rich in oll and natural gas. Glass, leather, and machinery are manufactured. (1910) 14,745.

Oleander (Nerium oleander), a handsome evergreen shrub with fragrant flowers, rather like carnations, of various shades of pink, red, and white; one of the most easily grown green-house plants. Its large, willow-like leaves when bruised have a powerful and disagreeable odour, and are beings poisonous to human beings and animals. The physiological effects are similar to those of digitalis.

Oleandra.a genus of evergreen tropical ferns, with ecceping shoots, jointed stems, and entire, lanceolate or strup-shaped fronds. They are grown in the stovehouse in hanging baskets or on pillars and walls in a layer of spliagnum or peaty soll held in place by a l England, towards the middle of the

The rest of the year a temperature of 60 deg. and moderate watering is sufficient.

Olearia, genus of evergreen a flowering shrubs, bearing in summer a profusion of daisy-like flowers as well as ornamental foliage. O. haastii is In the New Zealand Daisy Bush, and is

horders and

hardiest species.

Olearius, or Oehlschlager, Adam (c. 1600-71), a German traveller, born at Aschersleben, in Prussia. He 'acted as secretary to an embassy sent by the Duke of Holstein to Russia and Persia. On returning from this mission, he was made librarian and keeper of the Duko's museum. O. was also a mathematician and author. He published several works, the most noteworthy being a Chronicle of Holstein and Travels.

Oleaster, a name which often leads

variegated foliage, and e or yellow fragrant, deli-...rs, which are rich in hency, and which are followed by decorative

edible berrles.

Oletiant Gas, see ETHYLENE.
Olenek, a riv. of Yakutsk prov., E.
Siberia, rising from two branches
under the Polar circle and flowing N. into the Arctic Occan. 70 m. from the Lena's W. mouth. Length 1000 m. Ust-Olensk vil. is at its mouth.

Osta-Olensk vil. is at its mouth.

Osman, the interval of the property of its attack of the property of its attack of the property of its attack of the property of the proper

Oleomargarine, see MARGARINE. Oleron, Isle of, an island of the At-lantic Ocean, off the coast of France, and part of the dept. of Charente-Inféricure. Its maximum length is 18 m., breadth 7 m., and it covers an area of 66 sq. m. The surface is generally fertile, and it produces corn and wine. It has two towns, Château and St. Pop. 17,800. Pierre.

Oléron, Judgments of, a code of mari-time laws in use in W. Europe during the middle ages. It is said to have been originated by Eleanor, Duchess of Guienne, mother of Richard I. of

1370, and to have been introduced into England in thereign of Richard I., with some amendments and additions.

Olga, St. (d. 969), the wife of Igor, prince of Kiev. On his death in 945, she ruled for ten years as regent for her son Sviatoslav. In 955 sho was baptised at Constantinople, and was after her death canonised in the Russian Church, her day being now com-memorated on the 11th July.

nemorated on the 11th July. Olibanum (Gk. $M\beta_{avos}$, frankincense) is a gum-resin yielded by various species of the genus Bosuellia, found in Somaliland. The gum is obtained by making incisions in the stem, and on account of its fragrance

is used in incense.

Olifant's River: 1. A riv. of S.E. Africa, in the Transvaal, which rises under the name of the Rhenester to the E. of Pretoria, flows N.E. and then E., and finally joins the Limpopo in Portuguese ter. 2. A riv. of Cape of Portuguese ter. 2. A riv. of Cape of Good Hope, which flows W. along the base of the Zwarte-bergen, then S., and joins the Groote to form the Gouritz. 3. A riv. in the W. of Cape of Good Hope, which flows N.W., then S.W., and enters the Atlantic Ocean on the W. coast.

Oligarchy (Gk. δλιγαρχία), 'the government of the few,' was the name given to that form of constitution 'the amongst the ancient Greeks where a portion of the community were in possession of power, e.g. the governments of Thebes, Megara, and Corinth. At the present time it corresponds with the term 'aristocracy,' but in ancient times, although it was acknowledged that an 'aristocracy' often developed into an O., the two were distinguished, O., signifying the government of the wealthy, who were looked upon as directing their efforts towards their own aggrandisement and the maintenance of their own power and privi-leges, while 'aristocracy' meant the rule of the really best people for the

nublie good.

Oligocene System, the geological epoch which elapsed between Eocene and Miocene time. In Britain the Oligocene formations are only met with in the Hampshire basin, where they consist of thin-bedded sandstones, clays, marls, and limestones, known collectively as a Fluvio-Marine series. They are subdivided into the Headon Orborne, Bembridge, and Hampstead beds. Thesubdivisions, Lower, Middle, and Upper, of the Oligocene in France, Belgium, Switzerland, and N. Italy have been named after places of typical development, as Tougrian (from Tongres), Etampian (after Etampes), and Aquitanian (Aquitania) respec-

12th century, at Ólérou, part of the tively. In the Paris basin the system duchy of Aquitaine, which came into is represented by facustrine marls the possession of the French crown in with the gypsum of Montmartre forming the Lower Oligocene, followed by lacustrine and marine maris. highest beds are the sandstones of Fontainebleau and the fresh-water limestones of Orleans (Beauec). The German Oligocene are renarkable for their deposits of lignite and brown coal. In N. America the 'Vicksburg beds' (orbitoitie) occurring in Ala-bama and Florida and the 'Red Bluff' of the Mississippi district are of Oligocene age.

Olinda, a tn. of Brazil, on the coast, 11 m. N. of Pernambuco. It contains convents and magnificent temples, and was once the cap. of the state.

Pop. 8000.

Oliphant, Laurence (1691-1767), a Jacobite, Laird of Gask. He was sent by his father to support the insurgents in 1715, and was present at the battle of Sheriffmuir. In 1745 he joined Prince Charles Edward, who made him governor of the north with Lord Strathallan. He was present at the battles of Falkirk and Culloden, and after the latter fled to Sweden. His lands were confiscated, but repurchased in 1753 by some friends. He returned to England in 1763.

Oliphant, Laurence (1829-88), an English author, born at Cape Town, and belonged to an ancient Scottish family. In 1851 he went with Jung Bahadur to Nepaul, and published his irst book, A Journey to Khatmandu, in 1852, as a result of his tour. Having returned to England, he practised law for a time, but soon threw over his legal studies, and went to travel in Russia. The outcome of this tour was The Russian Shores of the Black Sea (1853). In 1853-4 he was secretary to Lord Elgin at Washington and in Canada, and later acted in the same capacity on Elgin's expedition to China, about which he published Narrative of Mission to China and Japan. In 1870 he ma

his satirical no. 1871 aeted as

Times during He met and married Miss War. th her pro-

book called written at

), a story in cleverest works, and Alasolam, a novel, were also composed. Among his latan books his later books are: Episodes in a Life of Adventure; Fashionable Philosophy, a collection of various stories;

and Scientific Religion.

Oliphant, Mrs. Margaret (1828-97). an Euglish authoress, born at Wallyford, near Musselburgh. She produced her first novel, Passages in the

uamed met with such great success that on coming to London in 1852 she was invited to contribute to tho she was invited to contribute to the famous Blackwood's Mlagazine, and wrote Katie Stewart (1853), A Quiet Heart (1854), Zaidee (1856), and The Athelings (1857). Previous to this, she had, in 1852, married her cousin, Frank Wilson Oliphant, who was an artist in stained glass. She wrote in all about 100 books, the best known of which are: Adam Græme, 1852: all about 100 books, the best known of which are: Adam Græme, 1852; Magdalen Hepburn, 1854; Lilliesleaf, 1855; The Laird of Norlaw, 1858; Salem Chapel, 1863; The Rector and the Doctor's Familly, 1863; The Perpetual Curate, 1864; Miss Marjoribanks, 1866; Madonna Mary, 1867; Squire Arden, 1871; Hester, 1883; Kirsteen, 1890; The Marriage of Elinor, 1892; The Ways of Life, 1897, among works of fiction. But she also wrote the biographies of Edward Irving, Laurence Oliphant. and Irving, Laurence Oliphant, and Sheridan (English Men of Letters Series), and Historical Sketches of the Reign of George II., 1869; The Makers Reign of George II., 1869; The Makers of Florence, 1870; A Literary History of England from 1790-1825 (1882); The Makers of Venice, 1887; Royal Edinburgh, 1890; Jerusalem, 1891; The Makers of Modern Rome, 1895; besides The Victorian Age of English Literature with Incr son Frank, and The Beleaguered City, 1880; and A Little Pilgrim in the Unseen, 1882. Oliva: 1. A.tn. of Spain in the prov. of Valoncia, 40 m. S.S.E. of Valencia. It contains an ancient palace and manufs. linen cloth. Pop. 9344. 2.

an anotent palace and manufs. linen cloth. Pop. 9344. 2. A market tn. of W. Prussia, 4 m. N.W. of Dauzig. Pop. 9345.

Olivo Branch Petition, the last effort made by Congress in 1775 to conciliate the English government, after the outbreak of hostilities in the War of A monican Independence. The War of American Independence. The only answer given to this appeal was a large increase of land and sea forces and a declaration in parliament to take stern measures against the 'eonspirators and insurgents 'in America.

Olivares, Gaspar de Guzman, Count of, and Duke of San Lucar (1587-1645), a Spanish minister, born in Rome. He was appointed to a post in the household of the heir-apparent dur-ing Philip III.'s reign, and gained such a complete influence over the when he ascended the throno the whole management of public affairs was in his hands. Olivenza, a fortified the of Spain in the prov. of Badajos. It stands near the provided the provided from t constantly thwarted in foreign affairs by Richelieu, and had the mortification to witness the separation of Portugal from the crown of Spain,

Life of Mrs. Margaret Mailland, in and the loss of Brazil and other 1849, following this by Caleb Field foreign colonies. In consequence of and Merkland in 1851. The last these misfortunes the king was obliged to dismiss him in 1643, and he died two years later. He published an apology under the title El Nicandro.

Olive (Olea europæa), a slow-growing tree, with undivided leaves and axillary clusters of green flowers followed hy pendulous, lustrous, blueblack oily fruits. While green and unripe, the fruits are bottled or pickled in brine. Olive oil is extracted by pressure from ripe fruit. The tree has been cultivated since a remote period, especially on the borders of the Mediterranean Sea, and the cultivated forms exhibit great improvement in the size and oiliness of the fruits compared with the tree in its wild state. The wood is soft, but takes a high polish, and is used for making small fancy articles.

Olivenite; an olive-green coloured hydrous arsenate of copper with phosphorus. It occurs in orthorhombic prisms, but is also found fibrous and globular or earthy (h.=3, sp. gr.=14). The crystalline variety is found in Cornwall and Devon, and at Alston Moor in Cumberland. It has a vitreous lustro and breaks with a concholdal fracture. The fibrous variety is also called wood-copper or

wood-arseniatc.

Olive Oil, a fixed oil expressed from the fruit of the olive-stree, Olea curopea, of the natural order Oleacea. The olive-tree has been cultivated from the earliest times in Greece, Italy, Southern Spain, Asia Minor, and other Mediterranean countries, and has been introduced into Mexico, and has been introduced into meases, Chile, Peru, the southern states of America, Australia, China, S. Africa, etc., though the chief supply of the oil still comes from the Mediterranean coasts. The fruit is pressed to a pasty consistency, enclosed in woollen bags, and subjected to considerable pressure. This yields oil of the first quality: second and third siderable pressure. This yields oil of the first quality; seeond and third grades are yielded by subsequent pressings. O. O. is used for culinary purposes; for the toilet; in medicine as a laxative, a nutritive food, an emollient in external applications, etc.; and in the arts for the manuf, of soon are at the consists chiefly of leaf. soap, etc. It consists chiefly of olein. and palmitin.

Olive, Princess, a title assumed by Mrs. Olivia Serres (q.v.).

James I. and his family, Sir Philip rule. Sidney, and the family of Sir Kenelm Ol Digby.

masters. remarkable works ín

existing. Olives, Mount of, called also Mt. Olivier, Juste Daniel (1807-76), a Oliviet, is only once mentioned by this name in the O.T. (Zech. xiv. 4), turer at Lausanne Academy. Ho though it is elsewhere spoken of under other titles. It is situated to the E. of Jerusalem, from which it is separated returned to Svitzerland. His works by the valley of the Kidron or valley of Jehoshaphat. The name is frequently applied to the range of hills Chansons; Theatre de Société, fandished which it forms one. To its N. is the Scopus, the site of the encampment of the Romans under Titus. The canton de Vaud, 1837-41; Mouvement Prophets' is a hill to the S. of Olivet intellectual de la Suisse, 1845. See proper, and the outlying spur of the Rambert, Memoir, and selection of range to the S. is known as the Mt. of Offence. The M. of O. is connected Olivier, 1880. Olives, Mount of, called also Mt. on the western slope lay the Garden of Gethsemane. See works on Syria, Palestine, and Jerusalem by Stanley,

translated many works of the ancients, garlio-especially Cicero. gourri especially Cicero.

Olivetans, a religious order in the potch.'

origin, was regarded by his contemporaries as an Englishman. He John Tolomei (b. 1272), who was painted many portraits, and was exceedingly expert in his miniatures. The order is an offshoot of Bonedic-Among his works are the portraits of the content of the ferrile of the fer

Olivier, Guillaume Antoine (1756-1814), a French traveller and natural-Oliver, Peter (1594-1648), a minia- ist, born near Toulon. He went on a ture painter, the son of Isaac O. Ho scientific mission to Persia in 1792, and painted many of the court and returned with a valuable collection nobility, but is specially famous for a after an absence of six years. In 1800 series of copics in water-colour of he became a member of the Académie celebrated pietures by the old des Sciences, and soon after professor Many of these were made of zoology in the veterinary school of masters. Many of these were made of zoology in the vertilary senoof of them are still at Windsor Castle. O.'s copy of Vandyek's portrait of Rachel Perse, 1801-7, with an atlas and Massuo de Ruvigny, Countess of plates: Histoire naturelle des Insectes Southampton, is one of the most Coléoptères, 1789-1809; Dictionnaire miniature d'histoire naturelle des Insectes. Papil-

lons, Crustacés, etc., 1789-1825. Olivier, Juste Daniel (1807-76), a

ous Rocks.

Olla Podrida, Olla Podrida, or Olla Española (literally 'putrid pot'), so called Palestine, and Jerusalem by Stantey, from its miscellaneous contents, is a Olivet, Pierre Joseph Thoulier, stew made of meat, fish, poultry, Abbé d' (1682-1768), a French soholar, vegetables, and other ingredients, born at Salins. Amongst other works very common in Spain. It is cooked the published Histoire de L'Académie in a closed pot, and is always very Française (1723). He also cuited and lightly seasoned with pepper and seasoned with pepper and garlio. Compare the French 'potand the Sootch 'hotch-

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